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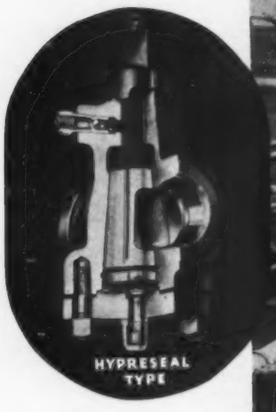
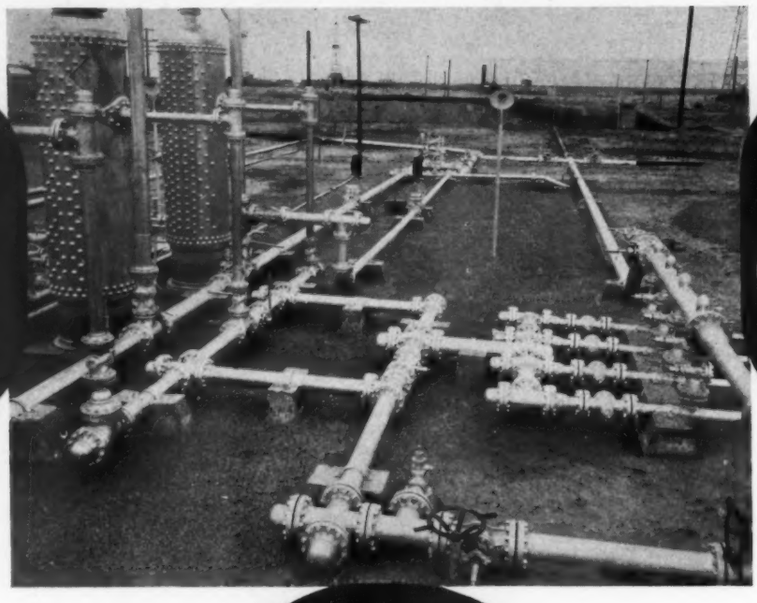
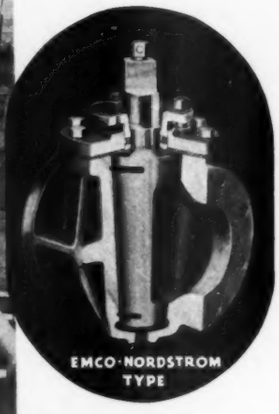




Photograph at right shows installation of Nordstrom Valves in the Belridge Field, California, where high-pressures predominate.



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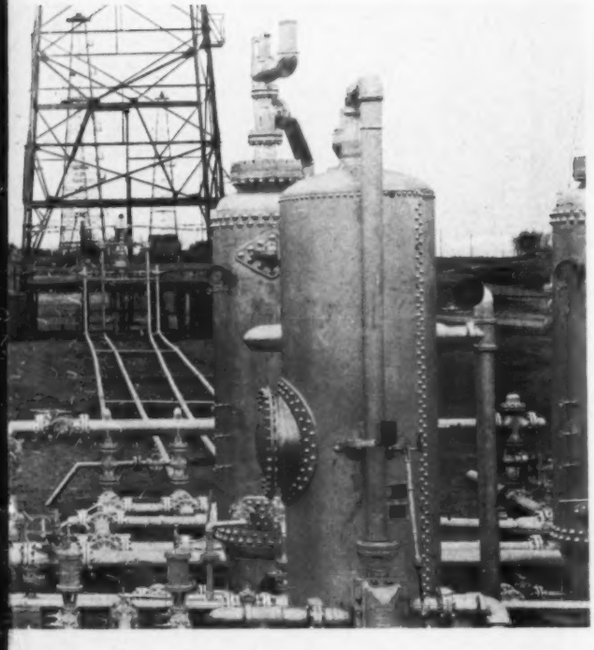
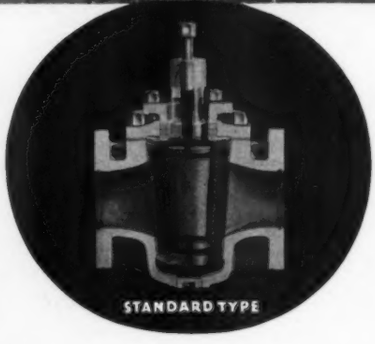


View above shows a modern gas trap installation in the high-pressure Belridge Field equipped with Nordstrom Standard and Hypreseal Valves, handling gas from two large production wells.



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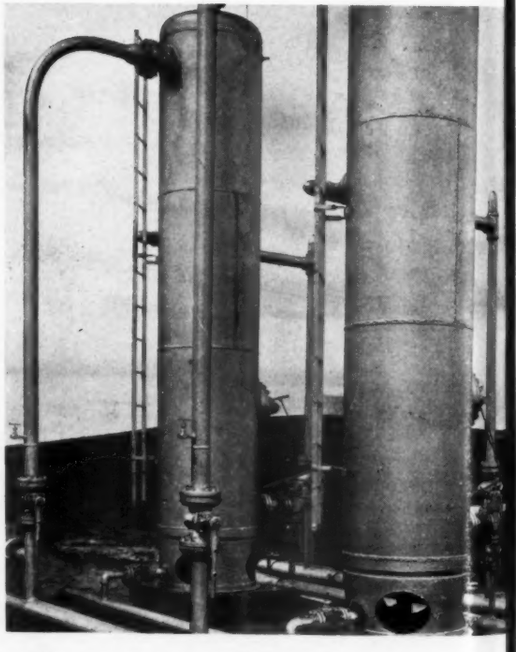

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JULY 2, 1936
VOL. 35, NO. 7

Extra copies of special issues are reserved for subscribers' needs and may be purchased by subscribers at the price of 50 cents per copy

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Output to Be Held in Line With Demand

THE petroleum industry's immediate outlook is viewed with increased equanimity after a survey of the week's developments. The daily average production of crude oil recommended by the Bureau of Mines is 2,917,200 barrels, an increase of 78,900 barrels above the recommendation for June and 257,200 barrels above the bureau's recommendation for July, 1935. A study of the accompanying table showing the daily average production of all fields in the week ending June 27 makes it apparent that if the bureau's recommendation is met by the industry as a whole, certain states will have to assume more than their share of the task in order to make up for unrestricted overproduction in other fields, and this they purpose to do.

The recommended allowable for Texas is 1,146,500 barrels daily. The State Railroad Commission, however, has set the allowable at 18,650 barrels less. The recommended allowable for Oklahoma is 569,800 barrels, but the State Corporation Commission has undershot this by 43,625 barrels. The Kansas State Corporation Commission similarly has set its allowable at 12,570 barrels less daily than that recommended by the bureau. Here is a total of 74,845 barrels daily less than the level recommended by the government. Against the action taken in these states is the expected excess production in California of 20,000 barrels daily and in Louisiana of 40,000 barrels, a total of 60,000 barrels, which must be deducted from the goals Texas, Oklahoma and Kansas—all in the Interstate Compact—have set for themselves. It also must be borne in mind that the goals referred to are still to be attained.

Production 2,968,728
Increase 7,971

The production figures for the week ending June 27 reveal that Kansas is the only one of the three states whose production fell within the allowable it is proposed to observe throughout July. Oklahoma is within the bureau's recommended allowable, but not the one set by its own corporation commission. Texas did not come within speaking distance of either the bureau or the state-fixed July allowable. Severe pinching in will be necessary if the objectives sought in July are to be gained, but the best interests of the industry demand that this be done. Assuming it to be useless to expect California and Louisiana to bring their production within the recommended figures, attention will center largely on Texas, which will have to cut most deeply in order to comply with its self-imposed order.

Gasoline consumption is establishing new records in almost all areas, with corresponding firmness of the market, encouraging the hope that the end of July will see all divisions of the oil industry in a healthier condition. A danger recognized by leaders lies in the disposition to rely upon vigorous markets to offset uneconomic practices.

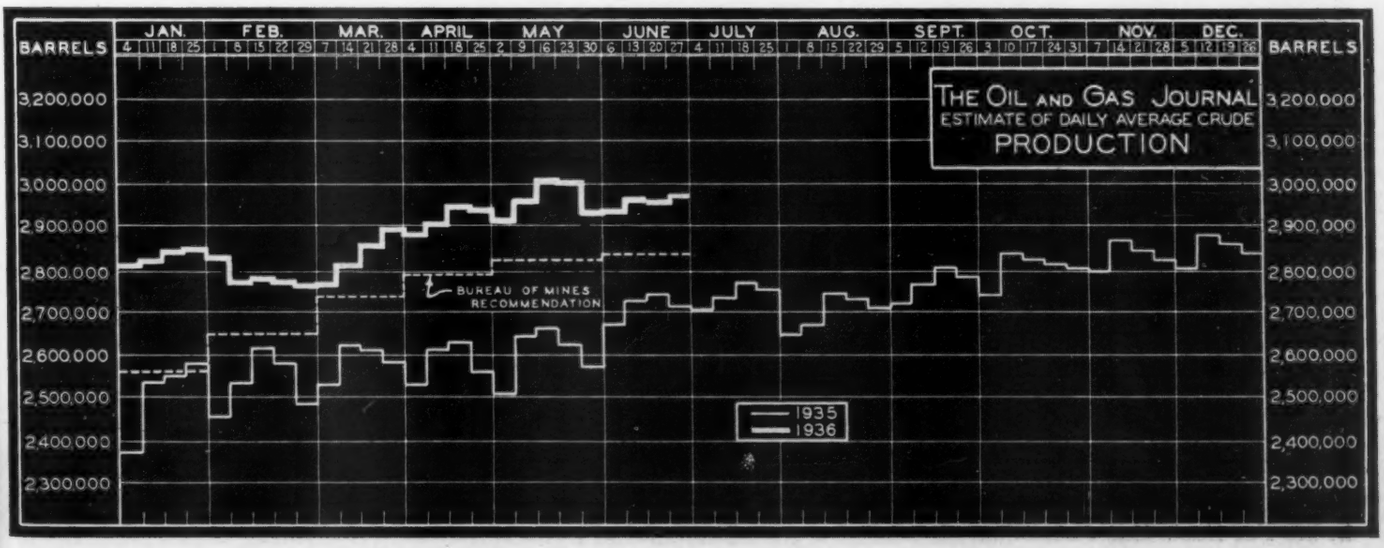
Daily Average Production for Week

	June 27 1936	B. of M. est. of demand	June 20 1936
Oklahoma City	137,775	.....	125,725
Seminole-St. Louis	103,440	.....	100,100
Remainder of State	314,110	.....	320,525
Total Oklahoma	555,325	552,500	546,350
East Texas	445,097	.....	444,150
West Texas	180,944	.....	179,289
Texas Panhandle	65,257	.....	64,893
North Central Texas	84,287	.....	84,492
East Central Texas	53,639	.....	55,000
Gulf Coast—Texas	254,587	.....	254,583
Southwest Texas	86,248	.....	86,087
Total State of Texas	1,170,059	1,125,700	1,168,494
North Louisiana	76,325	.....	75,425
Gulf Coast—Louisiana	146,398	.....	145,637
Total Louisiana	222,723	175,700	221,062
Santa Fe Springs	43,450	.....	43,650
Long Beach	67,250	.....	68,000
Kettleman Hills	77,400	.....	77,500
Remainder of State	382,700	.....	393,000
Total California	570,800	535,500	582,150
Kansas	146,000	153,100	149,175
Arkansas	29,660	31,800	29,565
Eastern fields	110,000	103,200	109,000
Michigan	36,831	37,000	30,381
Southeast New Mexico	70,080	67,400	67,390
Rocky Mountain area	57,250	56,400	57,190
Total United States	2,968,728	2,838,300	2,960,757

Crude Oil Stocks in U. S.

(BUREAU OF MINES ESTIMATES)

Week ending June 13, 1936	312,543,000
Week ending June 6, 1936	314,353,000
Week Ending June 15, 1935	336,004,000



SPARKS FROM THE NEWS

Future

Something for the gasoline statisticians to worry about. Babson says half the population will be living on wheels in 20 years.

Opposite

Motor vehicle output should be experiencing a large seasonal decline. It isn't. Another reason the gasoline business looks good for the last half-year.

Evolution

An East Texas pipe line will transport natural gasoline. Additional indication of the tightness of crude in that area.

Cheap Money

Recent refunding by oil companies successfully accomplished in every instance. Investing public believes in future of petroleum industry.

New Market

There are more than 300,000 trailer homes. They use more gasoline per mile and go more miles.

More for Less

Natural gas volume up 18.6 per cent and revenues only 12.3 per cent. In line with the trend of that industry to give more for less.

Bang!

The holiday week-end immediately ahead should establish record gasoline consumption for the year. And so Fourth.

Gold Dust Twins

Oil company earnings for first half of 1936 will make pleasant July reading. Better prices and greater volume are unbeatable team for profits.

Far East

A producer-refiner joins hand with a marketer in the Far East. Each benefits.

High-Hobbs

Lea County, New Mexico, earned the spotlight last week with 69,940-bbl. daily average from 845 producing wells. All-time high for the area.

Lull

No important fields have been discovered recently despite widespread exploratory work. By law of averages a strike is due.

Confidence

Activity in stripper well areas reflects operators' faith in proration. Without permanent restriction heavy expenditures would be unthinkable.

Making Hole

Week ending June 27 recorded 537 completions. This is at merry clip of nearly 28,000 wells per year. Allowance should be made for seasonal activity.

$8,000,000 Line

Natural gas from Texas Panhandle extension will be available in Detroit July 7. In less than three months 230 miles of 22-inch pipe were laid.

Teamwork

Proration results feature week's news. Oklahoma and Kansas lead the way with Texas and New Mexico cooperating.

Progress

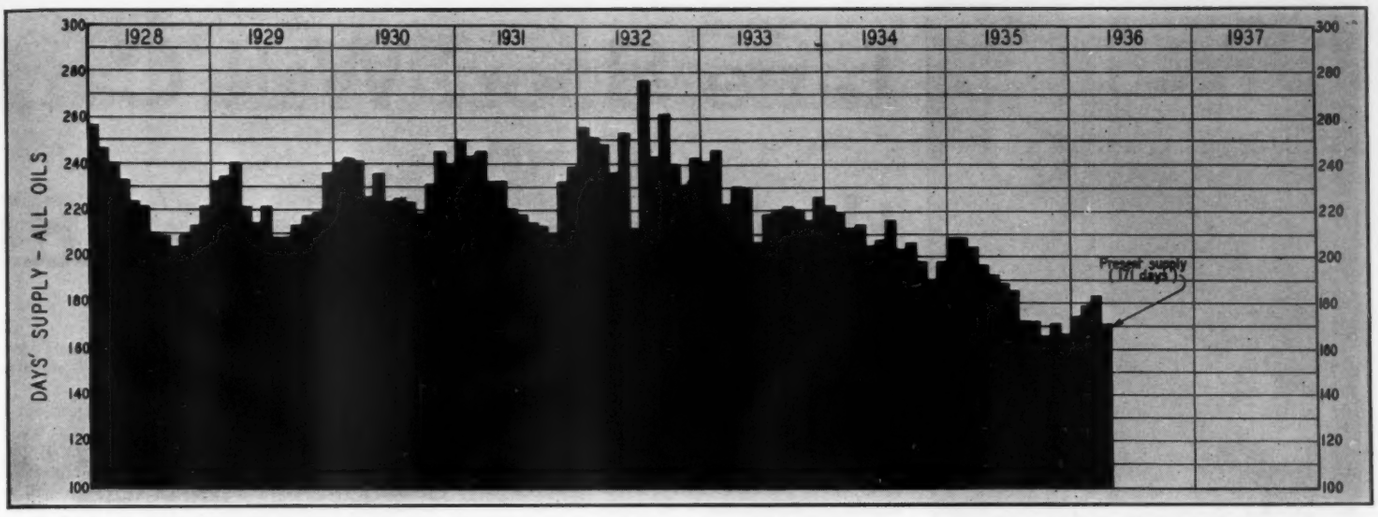
Much-discussed marketing code is to be presented to Federal Trade Commission for approval. Progress despite handicaps.

Compensation

Oil men bored with oratory emanating from the two political conventions should keep in mind the thousands of gasoline-consuming taxicabs which did a maximum business.

Disappointment

Excess stocks of gasoline are shrinking. A last-minute investigation revealed no disposition on the part of taxes to do the same thing.



Days' supply of all oils above ground in the United States. The mounting demand for oil is reducing our visible supplies despite a relatively heavy crude oil production schedule and unusually large gasoline inventories

Decrease in Days' Oil Supply Factor in Present Situation

By W. T. ZIEGENHAIN

Since the beginning of the petroleum industry, men engaged in it have measured their successes in barrels of oil. Producers, refiners and marketers alike have chosen to adopt that term to express size or condition, and it is only natural that the statistical position of the oil industry be judged by them in terms of barrels. They have come to discuss crude stocks, refinery runs and motor fuel inventories with respect to volume and to make comparisons with those of a year ago on that basis. But this method ignores the factor of consumption and could lead to distorted conclusions.

In regard to crude oil there has been a general agreement within the industry that inventories should be reduced, and present stocks of refinable crude are approximately 125,000,000 bbls. under the peak. This reflects the fact that as the industry under a proration policy built up underground reserves there was less need for heavy stocks above ground, and several companies have reduced their stocks of the latter 50 or more per cent. The immediate benefit is a reduction in capital investment and important savings in taxes and other charges.

Just how far this program of reduction can go is dependent on several factors, some of which, including the known underground reserves, will change from year to year. Economists have placed the minimum stocks of crude at 200,000,000 bbls. to 250,000,000 bbls. The point to be made in this connection is that as consumption expands the significance of total stocks declines faster than is indicated by the data based on volume. The following discussion and the accompanying charts and tables point out some of the outstanding developments in this situation.

The changing significance of stocks from the refinery end is apparent in a study of gasoline inventories at this time. Stocks of motor fuels on June 20, as reported by the A.P.I., totaled 69,214,000 bbls., which was approximately 10,000,000 bbls., or 15 per cent greater than on the corresponding date of last year. The stocks of a year ago, based on the total demand in 1935, represented 46 days' supply. Based on the estimated demand for 1936 of 500,000,000 bbls., which now appears too low, the stocks on June 20 represented 50 days' supply, or only four days more. In general, refiners and water terminal operators find that as their demand increases they must expand their working storage. This is particularly true at the start of the season of greatest gasoline demand. This explains why some large and small operators, faced with a 10 per cent gain in demand through the summer are not worried about their gasoline stocks, although they are in many cases 10 to 30 per cent greater than a year ago.

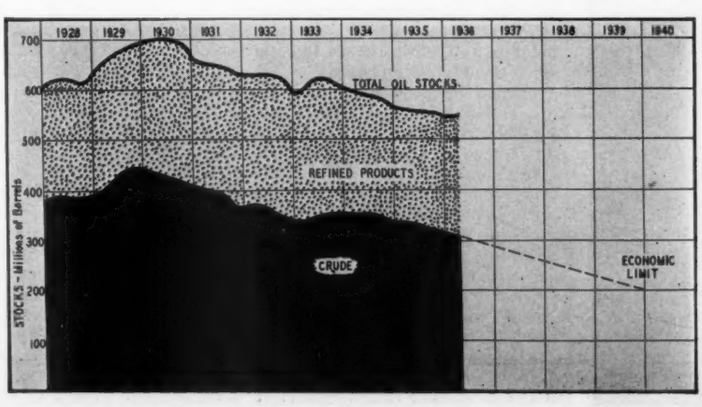
Not for many years have the visible stocks of all oils been so low in early summer, and never before have we faced such a bright outlook for sustained record oil consumption.

This has been accomplished through planning, economizing and sometimes sacrifice on the part of individual companies in order that the industry as a whole may eliminate burdensome and excessive inventories, which it came to recognize as soon as it learned there remained a dependable supply of oil below ground. Once the geologist, the engineer and the operator agreed to this, it was only logical that certain minimums, or "economic" limits, or visible or "above-ground," inventories be established and the industry subscribe to a program of self-control.

It was agreed that 200,000,000 bbls. of crude would be an economic limit to which stocks might be reduced; experience has indicated that about 35,000,000 bbls. is the limit to which gasoline stocks might be reduced at the start of the storage period in the late fall, and a minimum fuel oil inventory approximating 70,000,000 bbls. seems reasonable for the purpose of arriving at the minimum stocks of all oils which the industry might carry as the "economic limit." Totaling these figures and adding 80,000,000 bbls. to provide for carrying minimum stocks of kerosene, burner oils, lubricants and unfinished oils, we reach a figure of 385,000,000 bbls.

If the industry arrives at this ideal condition, it will still have about 120 days' supply of oil tied up in tanks and in the processing stage. It then becomes a matter of individual analysis and conjecture to decide whether 170 days' supply, such as we have at present, is still too high. We may recognize factors tending to support both sides.

The executives of some companies choose to call attention to the present stocks of motor fuel, which approximate 72,000,000 bbls., and others point to the excessive production of crude oil thus far this year. These warnings must be considered, as it was under similar conditions that trouble was injected into the oil picture during 1928 and 1929, as revealed in the accompanying graph.



Total oil stocks have recently tended to increase due to large gasoline inventories but the extent of this rise has been small and may be considered seasonal

Line Soon Will Carry G the Texas Panhandle to

Cleaning out the trench

FORT WAYNE, Ind., June 26.—One of the fastest as well as most difficult pipe line jobs was completed last night with the laying of the last foot of the Michigan Gas Transmission Corp.'s natural gas line from Zionville, Ind., to Detroit. Testing of the 22-inch, 230-mile extension of Panhandle Eastern Pipe Line Co.'s system will be completed by July 2, and natural gas will be delivered from the Texas Panhandle and western Kansas to to Detroit by July 7.

Cost of the pipe line project to the Michigan Gas Transmission Corp., a subsidiary of Columbia Gas & Electric Corp., was approximately $8,000,000, and additional expenditures for new compressor stations and connections to be made in 1936, 1937 and 1938 by this corporation and Panhandle Eastern will bring the total to $16,000,000. The necessary funds were made available when a chancery court of Delaware, handing down a decision on an antitrust suit against the Columbia Gas & Electric Corp. and individuals, removed restrictions against lending of funds by this corporation to Columbia Oil & Gasoline Co. and Panhandle Eastern, its subsidiaries.

Contract for construction of the Indiana and Ohio sections of the pipe line, 172 miles, was awarded to the Bibb Contracting Co., Kansas City, Mo., March 17, and contract for the Michigan portion was given to United Engineers & Constructors, of Detroit and Philadelphia. W. S. Bibb, who is moving his offices from Kansas City to Dallas, Tex., upon his return from Indiana, was personally in charge of work in Indiana and Ohio. E. C. Macy, vice president of United Engineers & Constructors, of Monroe, Mich., was assisted by F. L. Jonston, superintendent, in the laying of the 58-mile Michigan section. Division of the general contract was made necessary by Michigan state law, which requires that domestic agencies have charge of construction work in that state.

Subcontracts were completed for electric welding on the entire line by H. C. Price, Inc., of Bartlesville, Okla. The pipe stringing work was carried out by C. Hobson Dunn, of Dallas, Tex., in Indiana and Ohio, and by Tibbets & Tibbets, of Olatha, Kans.

For Michigan Gas Transmission Corp., J. C. Reinbold was general superintendent over the pipe line construction work: D. K. Stephens, division superintendent of Panhandle Eastern, was direct construction supervisor, and was assisted by L. E. Ingham, formerly of Ohio Fuel. Headquarters of the Michigan Gas Transmission Corp. will be in Detroit, with G. S. Young, formerly of United Fuel, Charleston, W. Va., in charge. Mr. Ingham will be operating superintendent, while J. L. Cummings, formerly of Panhandle Eastern and Cities Service in Texas, will be field superintendent.

Lowering pipe into ditch with tractors

Coated and assembled on right of way

Detroit consumers will use straight natural gas and not a blend with the manufactured product which the natural replaces. The line will be capable of delivering 125,000,000 feet of gas each 24 hours at a pressure of 150 pounds at Melvindale, Mich., where a measuring station will be completed by the Detroit City Gas Co. at its Rouge River plant. The gas will travel over the Columbia Gas & Electric Corp.'s subsidiaries systems from the Texas Panhandle and western Kansas (Hugoton) gas fields for a total of 1,580 miles. The extension to Detroit probably makes this system one of the longest natural gas pipe lines in the world.

The present work did not require the construction of compressor stations. However, Michigan Gas Transmission Corp. is building a station at Montezuma, Ind., and this will be known as the Wabash station. Additional stations will be built as the increasing load requires. It is anticipated that in 1937 the corporation will build a compression station at Zionville, Ind., and another one in 1938 on the Indiana side of the Ohio-Indiana state line. The last-mentioned station will be known as the Indio station.

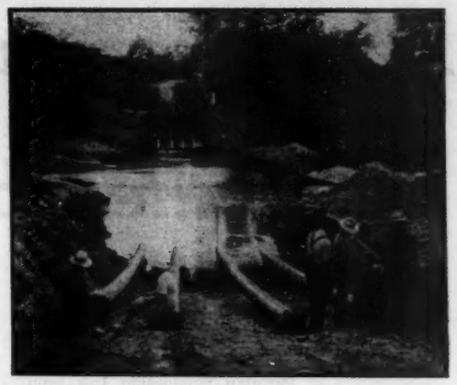
Panhandle Eastern is preparing to build seven additional compressor plants on its system. These will be located at Sneed, Tex.; Greensberg, Kans.; Olpe, Kans.; Haven, Kans.; Houstonia, Mo.; Centralia, Mo., and Pleasant Hill, Ill. These will be completed by October of this year. Contractors for the Texas and Kansas compressor plant construction work are Fluor Corp., of Los Angeles, Calif. The stations in Missouri and Illinois will be built by Arthur G. McKee Engineering Co., of Cleveland, Ohio. The stations in Indiana will be built by Lockett & Lockett, of Shreveport, La. Later the Panhandle Eastern will build a compressor station at or near Tuscola, Ill. In addition, in order to reinforce the 22-inch main line crossing on the Champ Clark bridge, at Louisiana, Mo., the Panhandle Eastern company will lay two submerged 12-inch lines across the Mississippi River about half a mile north of the present bridge crossing.

Difficulties encountered by the pipe-laying crews were unusual in several respects. In many places the ditch, normally 62 inches deep and 28 inches wide, spread out to depths of 15 feet and widths of more than 30 feet because of peat bogs and quicksand encountered. In several wooded sections the marshy ground was heavily matted with thick roots, and as many as four clam-shell excavators worked as closely together as possible ahead of the crew. The peat bogs handicapped the pipe-laying crews most seriously at points 30 miles and 50 miles out of Zionville, Ind., and between the Huron and Raisin Rivers in Michigan. At these places it was necessary to build corduroy roads to keep the excavating and back-filling equipment from sinking deeply into the soft ground. At all times through these treacherous stretches heavy belt-traction tractors moved ahead of the lighter equipment with connecting towlines to make progress possible.

The pipe, seamless steel provided by the McKeesport, Pa., and Lorain, Ohio, plants of National Tube Co., cost $3,500,000. The order was for 44,000 tons of 22-inch pipe, and gave 5,000 men employment for two months. The pipe-laying job gave an additional 2,000 men work for over two

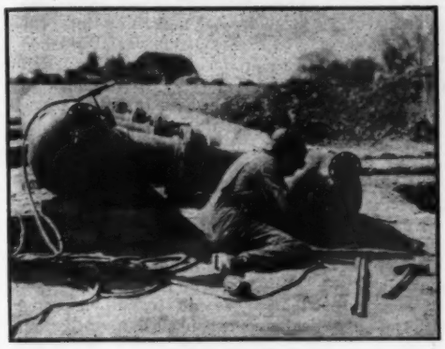
Gas From Kansas and to Detroit

By R. C. CONINE



Four lines in the Maumee River

months. The pipe was in 40-foot lengths, 22 inches outside diameter, of five-sixteenths-inch wall thick-



Making Maumee River header

ness. These lengths were welded, electrically, to 80-foot lengths, which were coupled with Dresser couplings. This was in Indiana and Ohio. In Michigan the only places where electric welding was used was on highway crossings, railroad and creek crossings. The rest of the Michigan schedule was completed with Dayton couplers at every 40-foot length.

There were seven difficult river crossings. In Michigan there were the Huron and Raisin Rivers, and in Indiana the Missenawa, Wabash, and St. Marys. In Ohio there were the Maumee, Tiffin and Salonica, the last named being crossed easily by the single 22-inch pipe. The other crossings were made with four 12-inch lines. All of the headers on the four-line river crossings were placed just above the highest-known water-marks. Each of the 12-inch lines, four across the seven rivers mentioned, were brought to a point at the top of each bank and consisted of 12-inch, 65-pound seamless, of one-half-inch wall thickness, on land and 49-pound, three-eighths-inch wall thickness of 12-inch pipe in the water.

Two of the rivers had solid rock beds. Here it was necessary to blast the rock, lay the line, and anchor it by grouting steel rods on the stone sides and across the lines. Dams were built across the rivers for the crossings. In most cases a cofferdam covered slightly more than half of the river to protect a bell hole at the river center, the dam being shifted to the other half to complete each crossing. In two instances the entire river was dammed and the water was carried over the pipe construction by four 22-inch lines. About 10,000 feet of drain tile had to be replaced by the pipe line crews as they crossed the states of Indiana, Ohio and Michigan.

Painting of the line with Standard of New Jersey and Bitumastic asphalt paint was required on 152 miles of the line from Zionville, Ind., into Ohio, and for 20 miles on the north end of the Michigan section. No protective coating was placed on the line in the sandy soil stretching 20 miles in Indiana and 38 miles in Michigan. Crane valves and settings were used throughout.

The Panhandle Eastern system now has 11 compressor stations, and drilling activity in the Texas Panhandle and western Kansas is moving forward rapidly. Present stations are at Liberal, Kans.; Louisburg, Kans., and Glenarm, Ill. These stations are equipped with twin tandem Cooper-Bessemer compressors with 1,300-horsepower driving engines. The Wabash station now under construction will have two 1,300-horsepower Worthingtons, and the remainder of the seven new stations will be equipped about evenly with Worthingtons and Cooper-Bessemer twin tandem 1,300-horsepower gas-driven compressors. Panhandle Eastern is installing two 1,000-horsepower Cooper-Bessemer compressors at the Liberal, Kans., station, giving this station a total of 7,000 horsepower. A natural gasoline and gas dehydration plant will also be built at Liberal.

Main-line gate assembly ready to set in ditch

Workmanship on the pipe line reached a high point. Tests now under way are showing entirely favorable results and it is certain the project will be accepted by Michigan Gas Transmission Corp.

Getting ready to drop it

Maestri May Succeed Walmsley

BATON ROUGE, La., June 29.—Robert S. Maestri, Louisiana commissioner of conservation, is expected to succeed to the office of mayor of New Orleans next week, following the resignation of Mayor T. Semmes Walmsley. Several men close to administration circles are being considered to replace Mr. Maestri. Other changes in the personnel of the Louisiana Conservation Commission are expected.

Elk Hills' Advance

The Standard Oil Co. of California, on June 22, followed by other purchasers, increased the posted price of crude oil in the Elk Hills field ranging from 5 cents per barrel on the lowest grade to 84 cents on the highest grade. Elk Hills producers reduced their production to requirements and a higher price was their reward.

Four Permian Producing Areas Now Indicated by Snow Hill Discovery

By H. D. EASTON, JR.
Petroleum Engineer and Geologist, Shreveport, La.

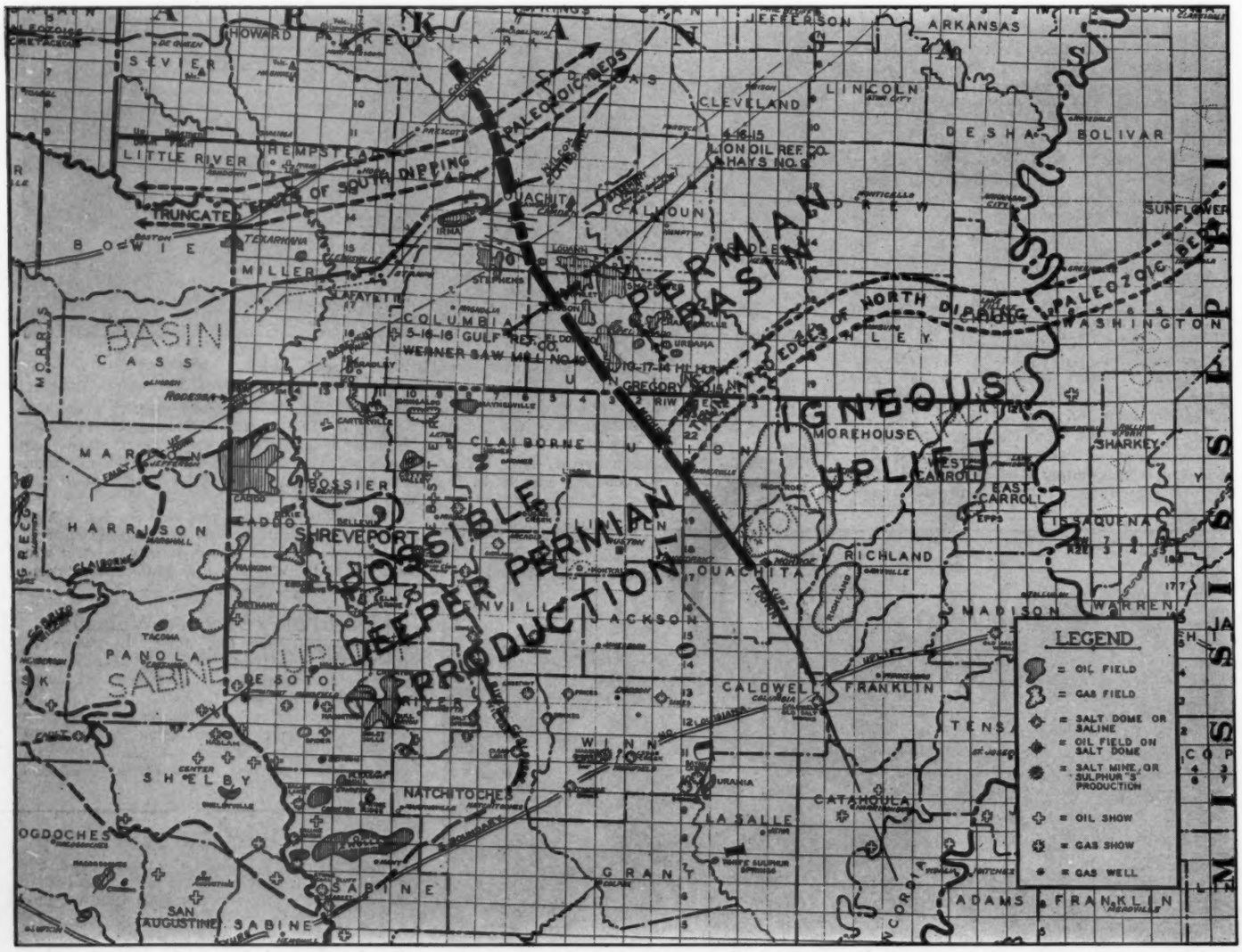
Permian production has been established in the Snow Hill area, on the northeast edge of the Smackover field, Ouachita County, Arkansas, in a structure entirely separate from Smackover, just south of an east-west fault (graben). Prior to this discovery at least three deep tests in South Arkansas reached the Permian and, as forerunners of the actual production, justify discussion. These wells have been spotted on the Index Map shown.

Lion Oil Refining Co. No. 9-A Hays, drilled during 1931 in section 4-16-15, Union County, a part of the Smackover field, probably topped the Permian around 5,042 feet, drilling through red shale and lime. Principal Permian lithological marker is the "Permian Red Beds," or "red beds," a common expression in western Oklahoma and Texas. These red beds of Permian age are not to be confused with the red beds of the Cretaceous. After drilling through some 700 feet of lime, in which shows of dead oil, salt water and gas were encountered, No. 9-A Hays struck rock salt at 5,965 feet and was abandoned in solid salt at 7,255 feet. Despite conjectures that this well had reached a deep-seated salt dome, it seemed obvious this salt, so typical of the Permian section of West Texas, marked No. 9-A Hays as the first deep Permian well in South Arkansas.

Next came H. L. Hunt, Inc., No. 15 E. F. Gregory, section 10-17-14, Union County, drilled in late 1934 and early 1935, which found red beds and anhydrite at 5,791 feet, found a lime section of approximately 800 feet in which some shows of oil were noted, and was abandoned in rock salt at 6,911 feet.

Gulf Refining Co. of Louisiana drilled No. 49 Lewis Werner Saw Mill in 1935, topped a 700-foot section of Permian limestone at 5,908 feet, and, after drilling through an 800-foot section of solid salt from 6,631 feet to 7,488 feet, went through anhydrite (also typical West Texas Permian formation), shale and sandstone to strike black igneous rock at 7,938 feet. After drilling into this igneous rock to 7,973 feet the well was abandoned.

The Permian has produced much oil, particularly in the Yates pool and the Regan and Big Lake fields of West Texas, where the "Big Lime" has a thickness of around 600 feet. Since the discovery well at Snow Hill was completed practically at the top of the lime, and at Yates five separate producing zones have been established in the first 250 feet of this Big Lime, Snow Hill may well prove to be a field of vast production. Knowing the productivity of the Permian elsewhere and its now proven productivity in South Arkansas, it is quite natural news stories of this area are now featuring an extensive search by all accepted means of geological and geophysical investigation for more Permian producing areas in South Arkansas and North Louisiana. Before outlining,



Areal map of southern Arkansas and North Louisiana based on H. D. Easton's index map showing geological features and tests

from a geological standpoint, the more promising areas it would be well to show the relationship between beds of the Paleozoic era, including the Permian, to one another and to other producing formations in this area.

The Paleozoics, including Permian, Pennsylvanian, Mississippian, and especially the Ordovician, are great sources of oil over the world and are, in fact, considered the source of all or much of the oil and gas found in North Louisiana, East Texas and South Arkansas. Possibly the oil being produced in this tri-state area has come up through faults to collect in structures where it is now found in younger formations overlying the Paleozoics.

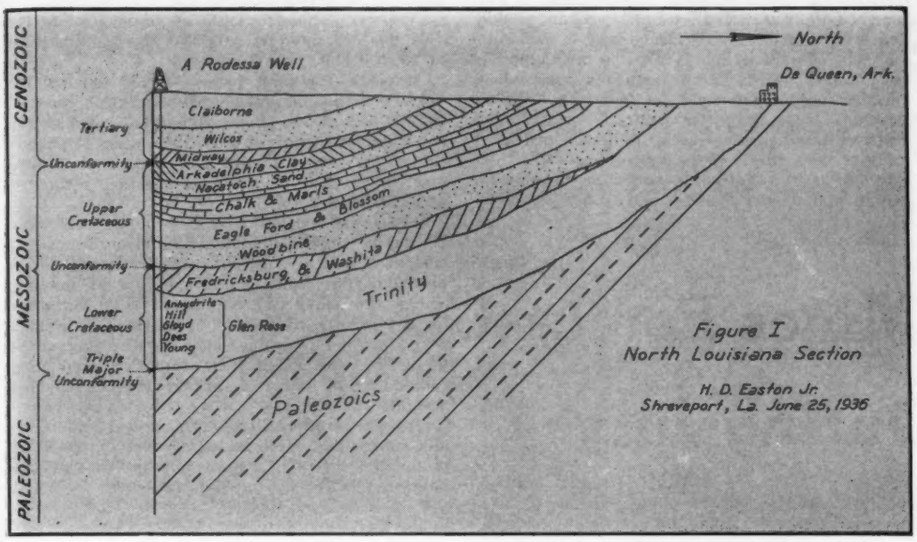


Figure 1 is a sketch showing, not to scale, relative positions of pay zones in the Shreveport region. A Rodessa well is taken arbitrarily as the starting point since the intent is merely to show a section including an area drilled fairly deep, on up to the Paleozoic outcrops.

Surface beds and those immediately beneath the surface comprise the lower (Tertiary) beds of what is known as the Cenozoic era (a little-used term meaning "Recent Life"), with the Claiborne, Wilcox (not to be confused with the Wilcox sand of Oklahoma, which is of Ordovician age) and Midway present.

Beneath these beds is found a major unconformity, or lapse between the period of Mesozoic and Cenozoic deposition, with the upper formation of the Mesozoic (another little-used term, this one meaning "Middle Life"), the Arkadelphia clay being the next one encountered.

Normally the Mesozoic includes the Upper and Lower Cretaceous, the Triassic and the Jurassic. The Upper Cretaceous includes Nacatoch sand, Annona chalk, Bossom sand, Woodbine sands and others, which constitute pay zones developed over a wide area, as shown by many oil and gas fields on the Index Map.

The Woodbine is the basal member of the Upper Cretaceous, and marks an unconformity between Upper and Lower Cretaceous. For example, after the bit passes through the Woodbine in East Texas it reaches the Georgetown; at Rodessa it next finds the Washita and Fredericksburg, whereas at Pine Island it has gone directly from Woodbine into Anhydrite of the Trinity in some places. Therefore with this unconformity present it is not always possible to predict just what beds will be encountered next beneath the Woodbine. Possibly a thousand or more feet of Lower Cretaceous may be entirely missing.

The Lower Cretaceous is noted principally for its production from the Paluxy (Upper Trinity) at Talco, the Rodessa flush production from Glen Rose (Middle Trinity) beds, and for its excellent possibilities in the Trinity Sand (Lower Trinity). Other Middle Trinity production, farther into the section than that at Rodessa, has been established in the Sugar Creek and Cotton Valley fields of North Louisiana.

A proposed 10,000-foot test well at Sugar Creek by Triangle-United-Standard, showed 20,000,000 feet of gas in a drill stem test around 5,480 feet near the base of the Glen Rose; an old well in the field was deepened to that horizon and had an initial production of gas, distillate and oil. Meanwhile, the original deep test is scheduled to drill ahead. The Ohio Oil Co. deep test in the Cotton Valley pool encountered 25,000,000 feet of saturated gas from a porous sharp-grained sand, thought to be the marine Trinity, from 8,130 to 8,145 feet. Another gas zone was found around 8,350 feet, with change of formation noted at 8,369 feet. Casing will probably be run, due to difficulties in handling high gas pressures, and it appears that a thorough exploration of the present section will establish a new producing horizon before the well is carried to proposed depth of 10,000 feet.

Next below the Cretaceous is found the Jurassic and Triassic wholly missing, and instead of having merely a "major unconformity" we find a combination of three major unconformities; one between Cretaceous and Triassic, one between Triassic and Jurassic, and another between Jurassic and Paleozoic, a total unconformity of vast significance.

Leaving the Trinity (Mesozoic) the bit will go directly into the Paleozoic (Old Life) of which the Permian is the top member. Or it may go directly into igneous rock after passing through the Cretaceous.

WHERE PERMIAN TO BE FOUND

The Mississippian member of the Paleozoic, where found on the outcrops north of Arkadelphia and Murfreesboro, Arkansas, is standing on edge, or very steeply inclined, and has been greatly faulted. It is probable the Paleozoic (e.g. Permian) are standing at steep angles dipping to the south beneath the Cretaceous in the area indicated on the Index Map in Southwest Arkansas, then flatten out into the Arkansas "Permian Basin" shown, to rise again to their truncated edges against the igneous intrusion of Northeast Louisiana and Southern Arkansas. On both the northern-western and southern-eastern sides of this Permian Basin, in the "belts" indicated on the Index Map, the truncated edges of the Permian, overlain by impervious Cretaceous, could readily form stratigraphic traps such as is found in the Oklahoma City field. On these truncated edges and on the basin area as a very irregular "basement floor" the Cretaceous beds were deposited. Whereas at the edges of the basin one would find stratigraphic traps, in the area within the basin, as at Snow Hill, where the Permian is lying more nearly horizontal, Permian production would be offered in local structures, such as faults.

Regional geological concepts are offered by Figure 2, a sketch section from the Ozark Mountains through the Fort Smith Valley, Ouachita Mountains, thence southeast to the igneous uplift of Northeast Louisiana. It is in the Pennsylvanian that much coal is found in the Fort Smith Valley. At the southern edge of the Ouachita Mountains we find the Jackfork Sandstone of the Mississippian, then find Cretaceous covering the Pennsylvanian and Permian, thereby preventing observation of their attitudes. A structural feature of regional magnitude which acts somewhat as a deterrent in development west and southwest of the Permian Basin, is shown on the Index Map. This is the Amity Fault-Monroe Fault "barrier."

It is believed these two faults form part of the same major fault system, indicated on the map. The Amity Fault is in the northeast corner of Pike County and in the northwest corner of Clark County, Arkansas. Its course is approximately N 45° W across Township 6s, Ranges 23 and 24w. It is described by Miser & Purdue (U.S.G.S. Bull. 808): "A cross fault, having a northwesterly trend and with its upthrow on the northeast side. . . . It truncates the east end of a syncline containing the Jackfork sandstone and the overlying Atoka formation, and the Stanley shale is brought up even with the Atoka, making a vertical displacement of at least 5,000 to 6,000 feet, which is the range of thickness of the Jackfork in the Caddo Gap quadrangle. How much greater the displacement is cannot be determined, but it may may amount to fully 10,000 feet." That is quite a sizeable fault and may well constitute a barrier.

The Monroe fault, a lower Cretaceous fault with maximum upthrow of probably 2,000 feet or more, is doubtless an expression in younger beds of a great Paleozoic fault like the Amity fault, and in reality this barrier would better be called the "Monroe-Amity Fault." It should be noted the upthrow of each of these faults is to the northeast.

It should not be forgotten that east of this fault zone in North Louisiana it is possible in many places igneous rock will be encountered immediately after penetrating the Nacatoch. However, farther north and east, in eastern Arkansas (indicated by the southeastern truncated Palezoic belt), approaching the Arkansas syncline and beyond, one could expect to find the Permian productive in stratigraphic traps.

West of the Monroe-Amity fault system, in the Sabine Uplift area of northwestern Louisiana, Permian production might readily be obtained in uplifted areas at depths in the range of 10,000 feet, and this fourth Permian area is shown on the map as "Probable Deeper Permian Production."

In the absence of extensive deep test wells in the areas shown and with doubtful subsurface correlation over appreciable distances, the seismographs are found quite busy in North Louisiana and South Arkansas. Although some geophysicists have said their principal problems in this area are "woods, swamps and mosquitoes" it would appear that a unique geological setup might make it almost impossible for the seismograph to locate certain of these "stratigraphic" pools. It has been pointed out that numerous pools, such as Oklahoma City, East Texas, and many lesser fields, could never have been found by any ordinary geological or geophysical means since no pronounced structure (such as an anticlinal fold or fault

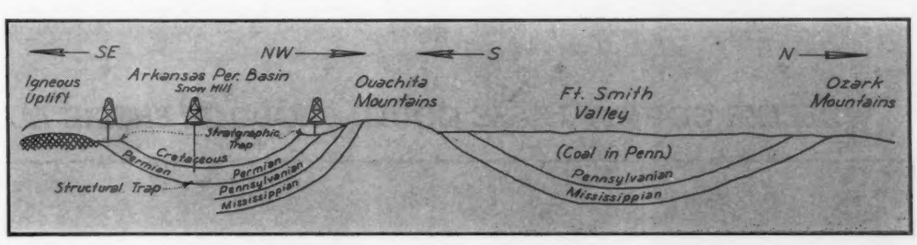


Fig. 2—Regional aspects of Paleozoics illustrating stratigraphic and structural Permian traps

break) is present, the oil and gas being trapped by impervious strata overlying petroliferous beds.

Shooting to locate anhydrite "highs" might prove relatively simple, since, once the velocities of the beds have been accurately determined, the 700-foot section of anhydrite in North Louisiana and South Arkansas could offer an excellent and fairly consistent reflecting surface. But in the case of stratigraphic traps as illustrated in Figure 2, it might be almost impossible for geophysics, othan than perhaps some gravimetric method, to locate what may prove to be major oil pools.

With the Paleozoic beds truncated and steeply inclined it would be necessary to map this very irregular basement floor. Shooting under these conditions would make it extremely difficult for the seismologist because of varying and unknown velocities of adjacent inclined beds offering uninterpretable results, as contrasted with shooting on uniform and more nearly horizontal anhydrite sections.

Thus on the heels of the Snow Hill discovery the geologist can see four areas favorable for Permian production in Louisiana and Arkansas (all indicated on Index Map); a northwestern belt of stratigraphic traps in south dipping beds, a Permian Basin in Arkansas where Permian production is to be had in structural traps, a southeastern belt of stratigraphic traps in north-dipping beds, and a northwestern Louisiana area where Permian production could be found in ordinary structural traps at greater depths. The nature and depth of traps in these areas is determined by a study of the attitude of the Paleozoic beds at their outcrops, of the Northeast Louisiana igneous intrusion and of the Monroe-Amity fault system.

U. S. Bureau of Mines Forecast of Demand During July

The daily average production of crude oil for July, recommended by the Bureau of Mines to meet the estimated demand and provide for reasonable changes in stocks, is 2,917,200 bbls., an increase of 78,900 bbls. above recommendations for June, and 257,200 bbls. (10 per cent) above the bureau's recommendation for July, 1935. The increase reflects seasonal and normal gains in gasoline consumption, partially offset by increases in the recommended withdrawals from gasoline and crude oil stocks.

During the last four weeks for which complete data are available (up to June 6), the production of crude is estimated at 3,040,000 bbls. daily. Crude stocks have decreased at about 16,000 bbls. daily, indicating a demand of 3,056,000 bbls. The bureau's estimate for that period was 2,896,000 bbls., indicating a deficiency of 160,000 bbls. in the recommended supply. However, most of this represents crude runs to stills to make gasoline, which normally would have been withdrawn from storage.

MOTOR FUEL

Domestic demand.—The domestic motor fuel demand for July is estimated as 46,480,000 bbls., a daily average of 1,499,000 bbls. Although this is 12 per cent above the indicated demand for July, 1935, it is only 9 per cent higher than the "normal" or estimated actual for that month. Apparently, the demand for motor fuel continues to exceed expectations.

Exports.—Motor fuel exports have been estimated at 2,400,000 bbls., an increase of 350,000 bbls. over the estimate for June, but 622,000 bbls. less than actual for July, 1935.

Stocks.—Stocks of finished and unfinished gasoline on April 30 were 73,509,000 bbls. According to the American Petroleum Institute, stocks declined approximately 2,100,000 bbls. in May and an additional 1,300,000 bbls. up to June 13, indicating about 68,400,000 bbls. will remain on hand June 30, nearly 9,000,000 bbls. more than on hand June 30, 1935. In view of the fact the heavy consumption in July will offer an excellent opportunity to reduce stocks, the recommended withdrawal for July has been raised to 4,990,000 bbls., or about 1,000,000 bbls. more than recommended for July, 1935, and June, 1936.

Gasoline production.—Motor benzol production and "direct" sales and losses of natural gasoline have been estimated at 900,000 bbls., same as for June. Addition of exports, and deduction of stock decrease and "direct" sales, gives 42,990,000 bbls. as the required production of finished and unfinished gasoline in July. his is distributed among the various districts as follows (thousands of barrels): East Coast, 6,550; Appalachian, 1,700; Indiana-Illinois, 7,260; Oklahoma, 3,030; Kansas-Missouri, 2,770; Texas Inland, 3,250; Texas Gulf, 8,770; Louisiana Gulf, 1,610; Arkansas-Louisiana Inland, 1,150; Rocky Mountain, 1,000; California, 5,900.

CRUDE PETROLEUM

Runs to stills.—The estimate of the ratio of natural gasoline used by refiners to the total production of gasoline is 5.7 per cent. Application of this percentage to the gasoline output gives 2,450,000 bbls. of natural gasoline to be utilized at refineries, leaving 40,540,000 bbls. to be made from crude. The estimated yield of cracked and straightrun gasoline is 44.835 per cent, an increase of about .23 per cent over June. Applying this percentage to total refinery gasoline gives 90,420,000 bbls. of crude required for runs to stills.

Imports.—Runs to stills of foreign crude for July are estimated at 3,000,000 bbls., an increase of 200,000 bbls. over June.

Exports, fuel and losses.—Crude exports for July are estimated at 4,400,000 bbls., an increase of 400,000 bbls. above June estimate but considerably below actual exports of July, 1935, when shipments to foreign countries were near their peak. Losses and consumption of crude as fuel are estimated at 2,100,000 bbls.

Stocks.—Provision has been made for withdrawal of 112,500 bbls. daily from crude stocks; compared with a suggested withdrawal of 75,000 bbls. daily in June. As in the case of gasoline stocks, the heavy consumption of July will offer an opportunity to reduce crude stocks, although sound economic consideration suggest this might better be accomplished by reducing production rather than by increasing refinery runs or reducing gasoline yields.

Required production.—The proper additions and subtractions give 90,433,000 bbls. as required production in July, a daily average of 2,917,200 bbls., distributed by states as follows:

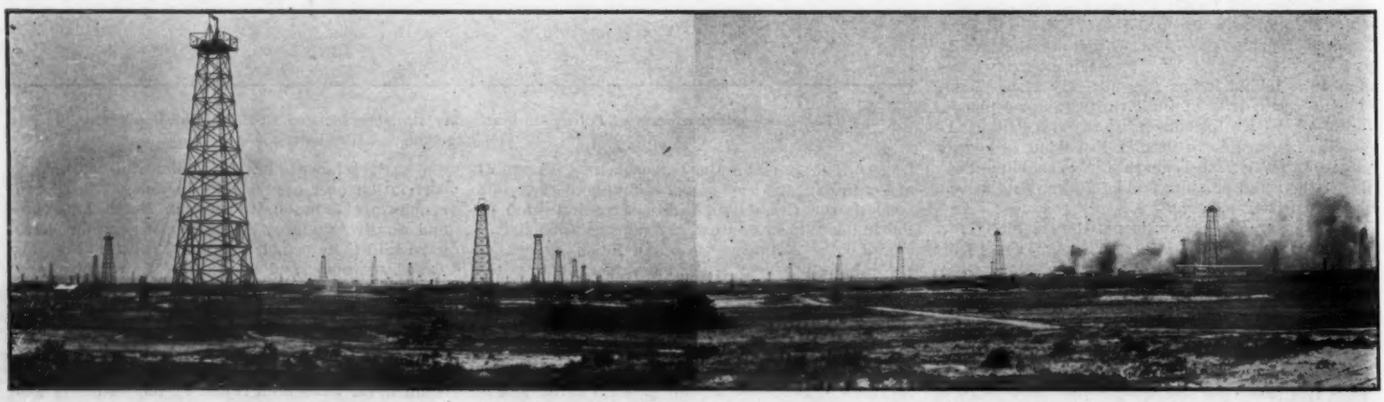
State—	June, 1936	July, 1936
Texas	1,125,700	1,146,500
Oklahoma	552,500	569,800
California	535,500	550,800
Louisiana	175,700	186,800
Kansas	153,100	164,200
New Mexico	68,300	69,400
Pennsylvania	42,600	44,500
Wyoming	37,800	38,800
Michigan	37,000	33,800
Arkansas	31,800	31,300
Kentucky	14,000	14,900
Montana	13,000	13,400
New York	11,900	12,500
Illinois	12,300	12,400
Ohio	10,500	11,100
West Virginia	9,900	10,300
Colorado	4,700	4,700
Indiana	2,000	2,000
Total	2,838,300	2,917,200

The recommendations in this table have been calculated as requirements for the months stated and are not intended to be calculations of daily average demand for the current year or any period other than months stated.

House Passes Conservation Bill

BATON ROUGE, La., June 29.—The Louisiana house of representatives approved the administration's conservation bill No. 465 applying to oil and gas by a vote of 83 to 0. Only slight changes were made in the amended bill. The full text of this bill in its amended form appeared in the June 25 issue of The Oil and Gas Journal. The amended bill passed the house unanimously, and has been referred to the senate for committee hearings and review.

WHEELER COUNTY LEASE COULD PRODUCE ENTIRE ALLOWABLE FOR PANHANDLE



This Wheeler County lease is capable of producing the entire allowable for the Panhandle of Texas. (New allowable for Panhandle, 59,480 bbls.) Royal Oil & Gas (formerly Laurel Oil & Gas), P. M. Keller lease, So. ½ of sec. 48, block 24, has 29 wells with a potential of 78,880 barrels, gravity 38 to 41.5.

California Standard and Texas Form New Foreign Marketing Company

By C. O. WILLSON

The formation of the California Texas Oil Co., Ltd., last week by the Standard Oil Co. of California and the Texas Corp. to operate as a marketing unit in the Far East is another development pointing to important changes and expansions in foreign oil operations. It follows the recent purchase of the South American Gulf Oil Co. (Gulf Oil Corp.), owners of the large Barco concession in Colombia, by the Texas Corp. and the Socony-Vacuum Oil Co., Inc.

Those familiar with operations outside the United States believe that these and other less heralded developments of the past year indicate a determination on the part of certain major domestic companies to strengthen their positions in foreign fields and markets. In accomplishing these objectives old Standard and independent affiliations are being forgotten in joint operations to fit the requirements of a given area with the possibility that more general consolidations may follow later.

The new California Texas company apparently is the answer to the often asked question of the past five years as to what was to be done with the crude oil available from the new reserve on Bahrein Island located in the Persian Gulf, discovered by the Standard Oil Co. of California in 1932. The latter company at the time of the discovery did not have refining facilities or market outlets outside this country. Market outlets are difficult to establish in foreign countries particularly in areas which could be served by the Bahrein production.

It was assumed by many that the reserve would eventually come under the control of one of the three major factors in oil operations outside the United States—Standard Oil Co. of New Jersey, Royal Dutch-Shell and the Anglo-Iranian Oil Co., Ltd. These three companies control the bulk of crude oil production outside the United States and the U.S.S.R. amounting to approximately 1,250,000 bbls. daily.

Conferences are known to have been held last year in which attempts were made by one or more of these companies to either purchase the Bahrein concession or provide markets for the crude as produced by the Standard of California. These negotiations were not successful and the Standard of California announced late last year that its operating subsidiary, the Bahrein Petroleum Co., Ltd., would build a refinery on Bahrein Island with an initial capacity of 10,000 bbls. daily. This plant is now under construction and will be completed and in operation before the end of the year. It is now agreed that the concession constitutes one of the largest oil reserves outside this country.

K. R. KINGSBURY

MAX THORNBURG

The discovery has centered attention on the oil possibilities of that section of the world. On the mainland of Arabia along the Persian Gulf, the Standard of California has found commercial production on another concession. In the same territory the Gulf Oil Corp. and the Anglo-Iranian Oil Co., Ltd., recently spudded in their first test on a large concession in Koweit.

The California Texas company to be owned and operated jointly by the Standard of California and the Texas Corp., will furnish the necessary outlets for the new Bahrein Island refinery whose crude oil capacity will be expanded later. The Texas Corp. has a distribution of petroleum products which extends to all parts of the country. It was the policy of the company for many years to serve these foreign outlets with products from its domestic refineries. In general this is not a desirable operating position, especially when long shipments are necessary as in the case of the Far East where the company in recent years has been competing with companies owning production and refineries located in that area. Over the past four years the company has acquired interests in refineries located in South America and Europe, but its position in regard to crude oil production outside this country has not materially changed. The bulk of supplies for its foreign distribution still comes from domestic refineries.

The new arrangement in effect establishes an integrated operation for the Texas and California Standard in the Far East which will occupy a strong competitive position and justify future expansion. In this connection it is worthy of note that the Standard Oil Co. of New Jersey and Socony-Vacuum Oil Co., Inc., in 1934 combined their Far East operations under similar circumstances. In this case the Standard of New Jersey had production and refineries in the Dutch East Indies without adequate market outlets. The Socony-Vacuum Oil Co., Inc., through the early marketing operations of the Standard Oil Co. of New York and Vacuum Oil Co. had the distribution throughout the Far East, but was forced to obtain the bulk of its supplies through long shipments from the United States. The combined operations are conducted under the name of the Standard Vacuum Oil Co. The other important marketing factors in the Far East are the subsidiaries of the Royal Dutch-Shell and the Anglo-Iranian Oil Co., Ltd.

James A. Moffett, a vice president of the Standard Oil Co. of California, will be chairman of the board of the California Texas Oil Co. He was connected with the Standard Oil Co. of New Jersey for many years, being vice president in charge of foreign marketing operations at the time of his resignation in 1933. R. H. Morrison and Max Thornburg of the California Standard, will be vice presidents. H. M. Herron, head of the export department of the Texas Corp., will be president of the company. J. V. Murray, of the Texas Corp., will be a director, and William Kunstadter, secretary and treasurer.

K. R. Kingsbury, president of the Standard Oil Co. of California, and Capt. T. Rieber, chairman of the board of the Texas Corp., announced the formation of the new company.

R. H. MORRISON

Natural Gasoline

Natural Gasoline Association Schedules Large Program

A program of technical studies covering a variety of subjects has been scheduled by the Natural Gasoline Association of America for the coming year according to William F. Lowe, secretary. The association was also primarily responsible for the development of a more accurate method of Reid vapor pressure determinations for motor fuels now in general use by refiners everywhere.

Committee personnel for the fiscal years of 1936-37 were approved at a recent board meeting and while the number of work groups has been slightly reduced the approved committees are larger to permit sub-division and the study of several problems during the same period. Chairmen and vice-chairmen respectively of the approved committees are: economics committee—E. L. Peck, Empire Oil & Refining Co., and S. S. Smith, Shell Petroleum Corp.; gas contract committee—J. W. Cowles, Shell Petroleum Corp., and R. A. Carter, Continental Oil Co.; gas testing committee—E. C. LeFevre, Empire Oil & Refining Co., and J. H. Boyle, Hanlon-Buchanan, Inc.; legal committee—W. P. McGinnis, Indian Territory Illuminating Oil Co., and R. C. Coffee, Lone Star Gasoline Co.; research and education committee—D. E. Buchanan, Hanlon-Buchanan, Inc., and F. E. Rice, Phillips Petroleum Co.; specifications committee—George Bunn, Phillips Petroleum Co., and Sam Hulse, Warren Petroleum Co.; technical committee—J. W. Vaiden, Skelly Oil Co., and D. B. Dow, Indian Territory Illuminating Oil Co.; traffic committee—Barney Linsey, Warren Petroleum Co., and W. H. Anders, Coltexa Corp.

T. R. Goebel, Skelly Oil Co., president of the association, indicates that the extensive research program and committee work planned is of vital interest and importance to the entire natural gasoline industry. He believes that the technical committee will probably complete its studies of Reid vapor pressure methods before September and will be able to make definite recommendations for a new standard method of making this test for natural gasoline. Other problems now being studied by the technical committee will be conducive to clearer specifications for the various grades of gasoline, he stated, and will simplify the relationship between buyer and seller.

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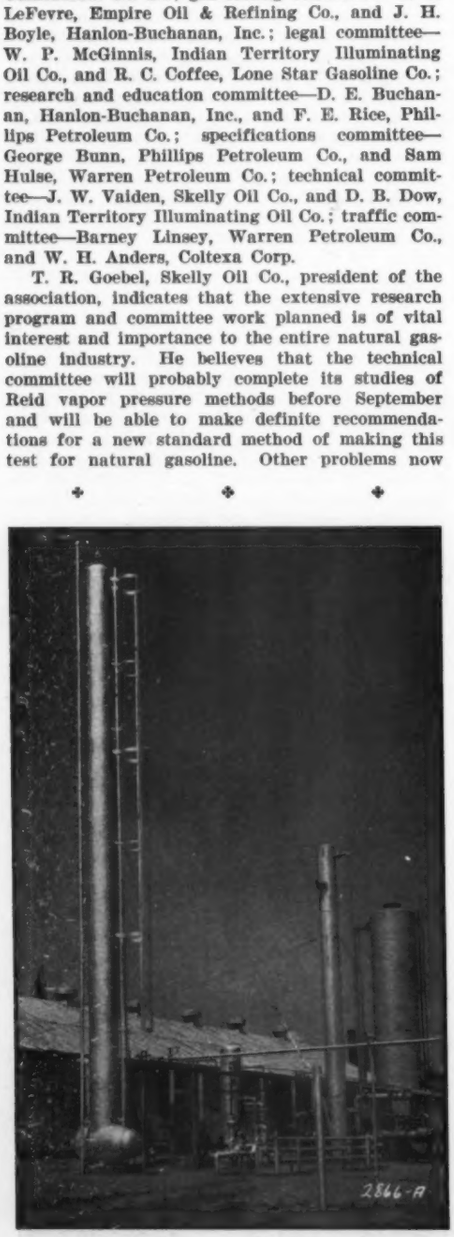


View of new stabilizer recently installed at Eason Oil Co.'s Crescent, Okla., natural gasoline plant

Manhattan Plant Operating

SAN ANTONIO, Tex., June 27.—The new low-pressure absorption plant of Manhattan Gasoline Co., an affiliated company of Clymore Properties, Inc., of San Antonio, began operations last week. The plant will utilize all gas production in the Plymouth field of San Patricio County, Southwest Texas. Operating on well pressure averaging about 40 pounds, the new gasoline plant will have an initial output of approximately 12,000 gallons per day of 22-pound product. It will continue to care for the expansion in production in the rapidly developing field, and is capable of processing 25,000,000 feet per day as equipped at present. The field gas yields approximately .8 gallon per 1,000 cubic feet.

Two New Winkler County Plants

FORT WORTH, Tex., June 29.—Magnolia Petroleum Co. is installing an absorption type natural gasoline plant with a daily capacity of 16,000 gallons on its 8,000-acre leasehold in the Sayre field. The plant will be located in section 1, Block B-26, P.S.L. Survey, Winkler County, Texas.

In an adjoining section to the west, Smith Brothers Refining Co., Inc., of Tulsa, is preparing to erect a 50,000,000-foot capacity plant of the well-pressure absorption type. The company recently acquired a 150,000,000-foot capacity plant from the American Natural Gasoline Co. and will make use of this equipment in the new plant. The former plant, which was located near Shamrock, in Wheeler County, was forced to be discontinued through inability of the company to market its residue gas in accordance with the state gas conservation regulations.

To Increase Plant Capacity

DALLAS, Tex., June 29.—The Texas Co. is to increase the capacity and change the type of its natural gasoline plant in the Les. K. Johnson pool in western Foard County from 5,000 bbls. to 10,000 bbls. of natural gasoline daily. An absorption type plant is reported planned in place of the present compression plant, which is processing around 3,000 gallons of gasoline daily. This gasoline is piped through a small line to a loading rack near Crowell from which point it is moved out via tankcar.

Continental Plant Completed

SHREVEPORT, La., June 29.—Continental Oil Co.'s natural gasoline plant being constructed at the Tepetate field in Acadia Parish, Louisiana, is nearing completion and is scheduled to be put into operation by July 15. The plant is now being water-tested and gas is expected to be turned into the lines by the end of the week. The plant has a daily capacity of 50,000,000 feet and will extract gasoline from wet gas produced in the Tepetate field. Residue gas will be piped through the company's pipe line to the Mathieson Alkali Works chemical plant at Lake Charles. Petroleum Engineering, Inc., of Tulsa was in charge of the construction.

The plant is of the absorption type, operating at pressures of 300 to 500 pounds per square inch. A crude stabilizing unit with a daily throughput of 7,500 bbls. and a gasoline stabilizing unit of 50,000 gallons per day capacity are also incorporated in the plant equipment. The plant is expected to begin operation at near rated capacity.

Natural Gas News

Gas Revenues Gain in April

NEW YORK, June 29.—Natural and manufactured gas utility revenues amounted to $67,568,200 in April, 1936, as compared with $62,969,100 for the corresponding month of 1935, an increase of 7.3 per cent, according to Paul Ryan, chief statistician of the American Gas Association.

The natural gas utilities reported revenues of $35,475,300, or 12.3 per cent more than for April, 1935. The manufactured gas industry reported revenues of $32,092,900 for the month, an increase of 2.3 per cent. Natural gas utility sales for the month amounted to 106,192,700,000 cubic feet, an increase of 18.6 per cent. Total sales of manufactured gas for the month were 33,018,300,000 cubic feet, an increase of 6.7 per cent.

Natural gas sales for domestic purposes showed an increase of 11.5 per cent for the month, while industrial sales gained 22.5 per cent.

Proposed Gas Taxes Modified

SHREVEPORT, La., June 29.—Louisiana gas producers see signs of slight relief in the fact that proposed legislation to heap additional taxes upon the natural gas industry of the state has been slightly modified. There remain, however, two bills in their original form which together would increase the present tax several hundred per cent.

Soon after the opening of the present legislative session it was officially announced that the natural gas industry must assume a greater portion of the state tax burden. The cause for the apparent change of mind in this regard may perhaps be twofold: (1) Needed revenue for the social-security program was obtained through the "luxury tax" measure, and (2) persistent efforts of the Mid-Continent Oil and Gas Association and other representatives of the industry were successful in establishing the harmful results that would follow such prohibitive taxation as was at first proposed.

Representatives of the state administration originally contended that as natural gas rose from 3 cents per 1,000 feet at the wells to prices ranging from 80 cents to 90 cents per 1,000 feet to the consumer, somewhere between those extremes the producer could stand additional taxation. This contention broke down when facts were presented to show that only about 3 per cent of the gas produced is consumed domestically (and that through a small portion of the year, but requiring the maintenance of equipment for peak loads throughout the year), and the remainder is sold to industries in competition with nearby states, having much lower gas taxes, at lower prices. The fact that the natural gas resources of Louisiana available from shallow sands is being rapidly depleted and future gas must be obtained from deeper zones at relatively higher prices, was also established to prove the need for scaling down. Even with these modifications, the bills in their present form increase the tax over 100 per cent.

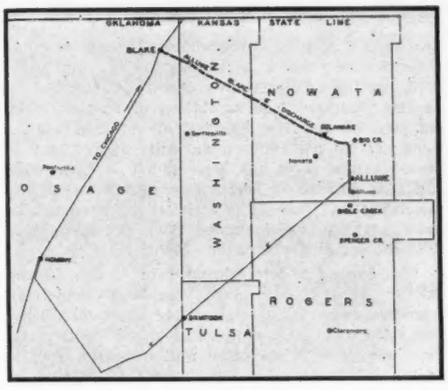
Carbon Black Project

QUEBEC, P. Q., June 20.—Maj. Gen. A. G. L. McNaughton, president, National Research Council of Canada, announced to the annual convention of the Canadian Manufacturers Association recently that negotiations are under way to utilize the waste gas of the Turner Valley and other western Canadian fields in production of carbon black to meet Canadian requirements. Canada last year imported approximately $1,000,000 worth of carbon black.

Pipe Line Activity

Preparing for Nowata Increase

Preparing for increased production from the old fields in Nowata County, Oklahoma, due to the water-flooding operations now under way, the Stanolind Pipe Line Co. is building a 40-mile 8-inch welded pipe line from Alluwe station to Blake station, Okla. This new line, shown on the accompanying map, will run through the center of a portion of the Nowata field in such a



Proposed route of new pipe line serving Nowata field, Oklahoma

manner as to permit the use of class "B" stations at various points where oil is to be gathered and transported.

The pump station at Alluwe will not be changed and will still be used to pump into the 8-inch line oil gathered in the existing system around that point. For flush production from various leases after the water-flood gets under way it is proposed to set up portable pumps and power them with electric motor or internal-combustion engine and in this way pump the oil from that immediate vicinity into the 8-inch line and transport it to Blake station. Because of the size of the line and the relatively small volume of oil to be handled the class "B" station will serve these leases very well.

The contract for laying the line has been let to O. C. Whitaker, Inc., Burkburnett, Tex., and work has been started. The pipe used has been reclaimed from old lines in Illinois and Missouri, with a small quantity from Oklahoma yards. This line will have a capacity in excess of 12,000 bbls. daily working under medium pressure conditions and it will serve the district for some time to come. If it is necessary to handle additional oil pump pressures will not be increased or new equipment added but part of the oil will be transported through the present system, which delivers the oil to the main trunk line at Hominy station. For this reason it is not proposed to take up this old line although some of the pump stations have already been dismantled. The new line should be ready to put into operation by August 1.

Line From Foard to Lake Pauline

QUANAH, Tex., June 29.—A contract has been signed by the Texas Co. and West Texas Utilities Co. for construction of a pipe line from the Foard County gas field to the Lake Pauline electric generating plant, according to Spencer Morrow, local representative of the Texas Co. The line will be started within a few days, and is to be completed within 30 days.

W. J. Basham of Texas Pipe Line Co. has been in Quanah studying construction data and is ready to proceed with the work at once. The engineers made four different surveys of the route.

A double line will be constructed across Pease River to provide emergency facilities in case of flood damage.

Completion of the line will bring the facilities of three companies to this county, with Lone Star and Northern Texas Utilities already operating within the county. The West Texas Utilities Co. is reported to be considering doubling the capacity of the Lake Pauline plant in view of its advantageous power source.

Humble Reconditioning Completed

KILGORE, Tex., June 27.—Humble Oil & Refining Co. has completed the cleansing and reconditioning of its 300-mile line running from the East Texas field to its refinery at Baytown on the Houston ship channel. The line was formerly used as a crude line but will be converted into a gasoline carrier, handling the entire output of the company's plants at New London and Kilgore. Daily capacity of the line is 12,500 bbls., but at present will handle approximately 9,000 bbls. daily. For cleaning, the line was cut into sections of 5 to 20 joints, the line washed with a caustic solution and water, and then flushed with distillate.

Edmond's Pool Line

On July 1 the Stanolind Pipe Line Co. again took over its pipe line serving the Edmond field, Oklahoma, and resumed the purchase of oil in that area which has been done by Continental Oil Co. for the past year. This 14 miles of 4-inch screwed pipe line connects with the Stanolind Pipe Line Co. system at Oklahoma station near Oklahoma City, and for the past year has been leased to Continental Oil Co. which has been purchasing and running the oil it needed from this field. Hereafter Stanolind Crude Oil Purchasing Co. will buy from 1,500 to 1,600 bbls. of oil daily in this field, to be mingled with oil from the Oklahoma City field and shipped east.

Refinery Projects

Producers Plant Completed

MUSKEGON, Mich., June 27.—A new 1,500-bbl. skimming plant now being completed at West Branch, Mich., by Producers Refining, Inc., is expected to be placed in operation about July 1. Initial crude runs will vary from 600 to 800 bbls. daily, it was indicated by company officials. Contracts have been signed with a number of Ogemaw County producers whose leases already have been connected with storage tanks at the nearby plants for some weeks.

Sinclair Capacity Increased

NEW YORK, June 29.—By installing fractionating towers and vapor and liquid heat exchangers, Sinclair Refining Co. is now able to process approximately 35,000 bbls. of crude oil daily at its Marcus Hook, Pa., plant. The company is now taking advantage of the greater crude capacity, compared to an average throughput of 30,000 bbls. in 1935 operations.

As an adjunct to supplying the higher crude charging capacity, the Sinclair company is constructing a modern dock, approximately 1,000 feet long, on the Delaware River at Marcus Hook to berth tankers and barges.

There has been no material change in the design of crude stills which were originally constructed to handle 10,000 bbls. per day.

Humble Buys Baytown Tract

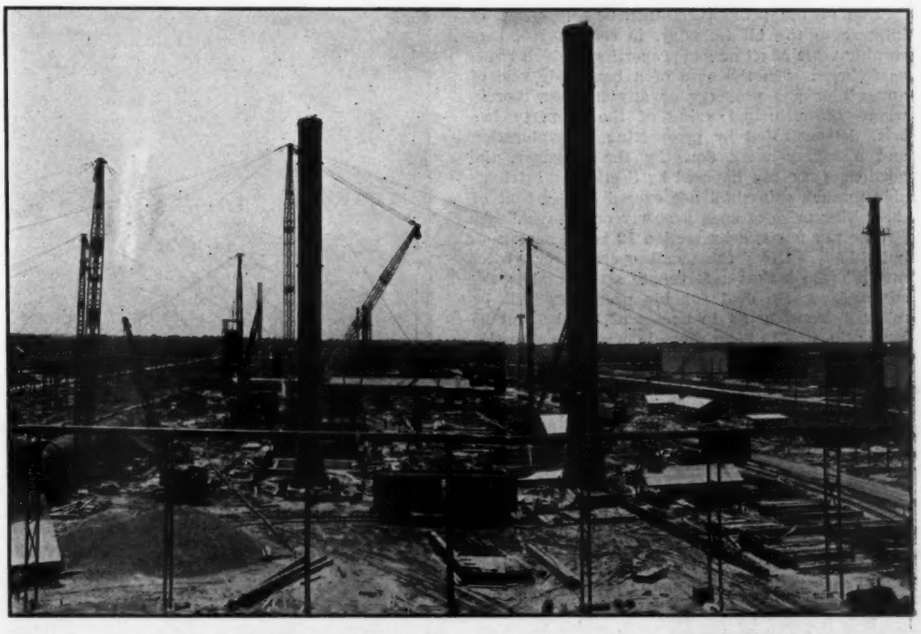
HOUSTON, Tex., June 27.—Humble Oil & Refining Co. has acquired a tract of between 500 and 600 acres adjacent to its Baytown refinery for a cash consideration of between $150,000 and $180,000. Humble executives said the land had been acquired for expansion of the company's refinery. The deal was made by S. A. Giraud, vice president and manager of sales.

Old Dutch to Add Lube Unit

MUSKEGON, Mich., June 27.—Old Dutch Refining Co., now engaged in installation of a $200,000 vapor-phase cracking unit at its Muskegon, Mich., plant, will add another unit for production of lubricating oil stocks after the cracking unit is completed about August 15, it was announced here today.

Construction of the cracking unit is progressing rapidly under R. B. Leydig, supervising engineer for the T.V.P. corporation. The plant is designed to produce a premium grade, high-octane gasoline. As a by-product it also will produce a large quantity of dry gas already contracted to West Michigan Consumers Co., which has agreed to pay $50,000 in advance upon completion of the cracking unit.

Plans for the lube unit on which bids will be taken later will be announced soon by John Borden, president and general manager.



Progress of construction on Pan American Refining Co No. 2 cracking unit and polymerization plant at its Texas City, Tex., refinery. The new unit probably will not be available for processing use before the last of the year

New Revenue Law Contains Features of Major Interest to Oil Operators

HELP WANTED

By the taxpayers of the United States, 10,000 assorted accountants, grammarians, astronomers and magicians to assist in interpreting and in computing tax liability under the revenue act of 1936.

First reading of the new revenue act, signed by the president last week, creates the impression that only by resort to some such unusual means as the foregoing will the American taxpayers be able to escape from endless administrative disputes and litigation in determining the amount of taxation to which this bill makes them liable.

Many provisions of the act are unchanged from the 1934 and 1935 laws, which were in themselves sufficiently complicated to suit the most exacting taste. The new provisions dealing chiefly with corporation taxes, however, are masterpieces of involved verbiage and cross-referencing so that the reader engages upon a highly speculative adventure when he attempts his first perusal. He can be confident when he starts out that he will be extremely surprised on numerous occasions at the places to which the guideposts along the way have led him.

ONLY ONES AFFECTED

Inasmuch as the 1936 act is effective as of January 1, 1936, for all fiscal years beginning after that date, those taxpayers whose fiscal year ends during the calendar year 1936 are the only ones affected by rates in the 1935 act. Dividends received are made subject to normal tax, otherwise, except in relation to rates, taxes on individuals are unchanged from the 1934 act. Personal exemptions and rates of normal tax remain unchanged, and the surtax rates are identical up to the surtax net income ($44,000 to $50,000) at 27 per cent. Thereafter they increase in the new law to a maximum of 75 per cent for "surtax net income" in excess of $5,000,000, as opposed to 59 per cent under the 1934 act.

One of the principal features of this act, of interest to the oil industry, is section 105, concerning "sale of oil or gas properties," which reads as follows: "In the case of a bona fide sale of any oil or gas property or any interest therein where the principal value of the property has been demonstrated by prospecting or exploration and discovery work done by the taxpayer, the portion of the tax imposed by Section 12 attributable to such sale shall not exceed 30 per cent of the selling price of such property or interest."

The tax imposed by section 12 is the surtax on individuals. Thus the small operator or "wildcatter," who makes a fortunate strike and works out a favorable deal for his properties will be relieved from surtax in excess of 30 per cent so far as the profits from the sale of these properties are concerned.

The oil industry will chiefly be interested in that part of the law which refers to corporation taxes. A departure from corporation tax policy in the past has been made in this act in that surtaxes are imposed upon corporations of various classes and under various conditions. The normal tax rate on corporation income varies from 8 per cent for net income less than $2,000 to 15 per cent for corporations having a net income in excess of $40,000. This compares with a flat 13¾ per cent for all corporation net income in the 1934 act, and rates of 12½, 13, 14 and 15 per cent for the same brackets imposed by the 1935 act, which rates, as pointed out, are ineffective for most taxpayers. Thus, for corporations having net incomes less than $40,000, some relief is provided by the new normal tax rates from the surtax rates, but here again the oil industry as a whole will receive little relief since relatively few companies will, in good years, have net incomes which fall within the brackets in which such relief is extended.

The surtaxes take three forms, but one of these, that for personal holding companies, need not be discussed here. The first surtax is that on undistributed profits. It runs from 7 per cent on the first 10 per cent of net income not distributed to 27 per cent on the last 40 per cent of adjusted net income not distributed. The adjusted net income is determined from the net income as heretofore determined by the allowance of the following credits: Amount of normal tax (8 to 15 per cent above described) and interest on United States obligations and its instrumentalities. Undistributed net income is the adjusted net income as above determined, minus the sum of various credits for dividends paid, for liquidation of certain debts contracted prior to May 1, 1936, and for the discharge of sinking fund obligations imposed prior to May 1, 1936. Dividends received by a corporation from another domestic corporation subject to the tax are deductible from gross income in determining "normal tax net income" to the extent of 85 per cent of the amount received, but this deduction is not allowed in determining "adjusted net income" or "undistributed net income" for surtax purposes.

There is a further surtax on "corporations improperly accumulating surplus" which are defined in the act as those corporations "formed or availed of for the purpose of preventing the imposition of the surtax upon its shareholders." In case of corporations subject to the surtax on undistributed profits as heretofore described, the surtax on the "improper" accumulation of surplus is 15 per cent of the first $100,000 of retained net income and 25 per cent on amounts of $100,000 or over. A new term has been added at this point, and it is defined at length for the purpose of determining this tax. It is "special adjusted net income," which is determined from net income by the allowance of a number of credits.

The basis for determining gain or loss in the sale or exchange of property has been extensively rewritten, and is so elaborately cross-referenced that only a lengthy study will reveal its import. The basis for depreciation and depletion remain unchanged from prior acts except in regard to coal, metal mines and sulphur, to which percentage depletion of 5, 15 and 20 per cent respectively are now permitted under certain conditions.

WHERE SURTAX INCREASES

In general, in respect to individuals, the new act is identical with the old except for the inculsion of dividend income in the normal tax net income to the point where the individual surtax net income is in excess of $50,000, in which case the surtax increases from 27 per cent to a maximum of 75 per cent instead of a maximum of 59 per cent as provided in the 1934 act, except that where individuals have developed oil property and sold it at a substantial profit the maximum surtax which may be levied on the profits on such sale is limited to 30 per cent.

In respect to corporations, however, most of these will be penalized to the extent of 1¼ per cent of net income by the increase in the commonly effective levy from 13¾ to 15 per cent, and in addition thereto and depending upon the proportion of their net income which has been distributed as dividends or in discharge of contracted obligations or in discharge of sinking fund requirements contracted prior to May 1, 1936, by a further amount of 10 to 27 per cent of the amounts not so distributed or limited by contract requirements.

It is thus possible for corporations having contracted obligations falling due in the calendar year, provided such obligations were contracted prior to May 1, 1936, to meet these obligations out of current income without incurring surtax liability on the accumulation of profits, but it will not be possible to avoid this surtax through the expedient of contracting other debts or sinking-fund obligations which will require definite allocation of income to such purposes. The amount of surtax liability is largely controlled by the taxpayer, who has the option of accumulating as net income and paying surtax on such an accumulation or distributing it as dividends and escaping such surtax. The purpose of this feature apparently is to return as much of the corporate income as possible immediately into the channels of circulation through expenditures for consumer goods.

Determination of the various kinds of net income specifically defined by the act will be extremely complicated. The language used in many of the sections will require the closest study to determine its import. The computation of accruals under the act, especially in conjunction with various state income tax accruals, will undoubtedly require resort to higher mathematics; and it can be safely stated that only a magician will be able to file a return under this act with reasonable certainty that it will be passed without contest and to the satisfaction of the taxpayer.

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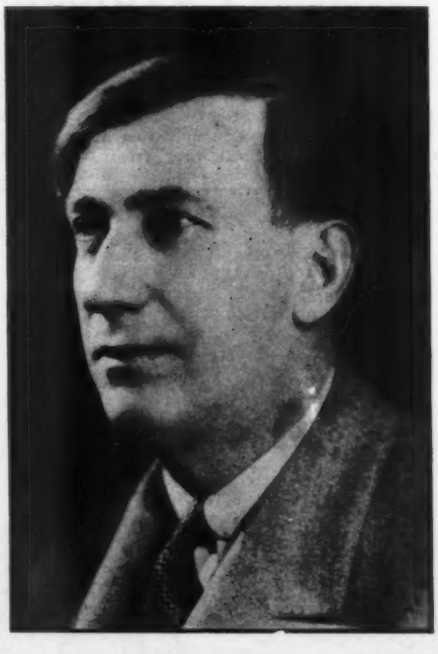
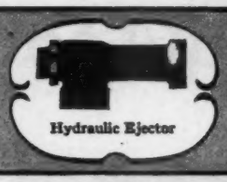
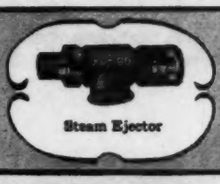
A.S.T.M. GUEST OF HONOR



George G. Oberfell, vice president of the Phillips Petroleum Co. was guest of honor at a dinner given by the Petroleum Committee of the American Society for Testing Materials at Atlantic City, June 30. The dinner was given in recognition of his distinguished career as one of the outstanding technologists of the petroleum industry. Mr. Oberfell has been particularly active in matters pertaining to the properties and utilization of hydrocarbon gases and volatile liquids.


Hydraulic Ejector

PENBERTHY PRODUCTS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"Safeguard" Automatic Liquid Level Gage

Automatic Injector

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EXTRA HEAVY WATER GAGE

"Navy Type" Liquid Level Gage

Gas Engine Lubricator

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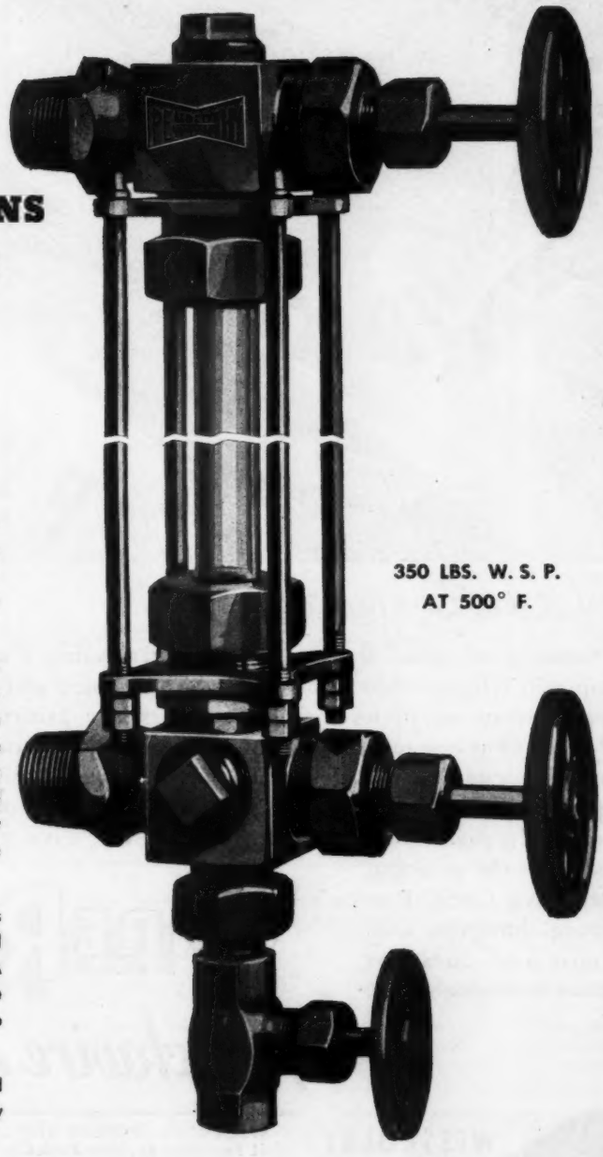

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Ball type safety valves are located in each gage arm to automatically and positively close when the glass is broken. Ball in lower valve must be lifted to seat and cannot close unless glass breaks; this absolutely prevents a false water level from being shown. The shut-off valves are arranged for easy regrinding. Packing glands prevent any torsional stress on glass when packing nuts are drawn down.

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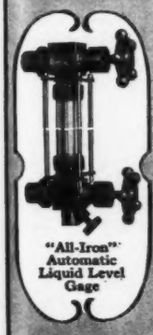
The "Navy Type", like other Penberthy water and liquid level gages, is carried in stock by supply houses everywhere.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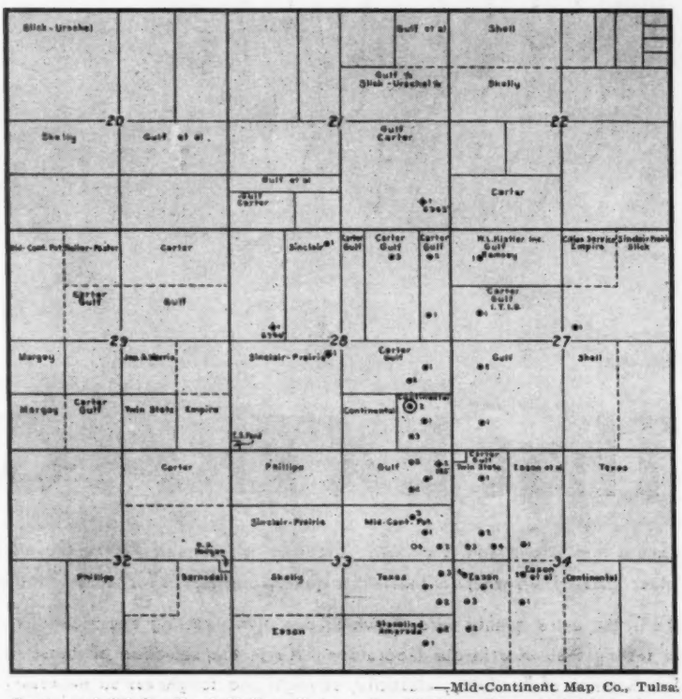
Crescent, Opened in 1930, Has Biggest Oklahoma Producer of 1936 to Date

By DAL DALRYMPLE

Five years and eight months after the first well was completed in the Crescent area of western Logan County, Oklahoma, that small but prolific pool last week provided a new sensation in Oklahoma oil circles with the state's biggest producer of 1936 to date. It was Continental Oil Co. No. 2 McConnell, NW SE SE section 28-17-4w, which was given a potential rating of 33,928 bbls. of oil daily—big production for any well in any field, anywhere.

The discovery well in the Crescent pool was the Eason Oil Co. No. 1 Katscher, SW NE SW section 34-17-4w, which later proved to be on the southeast edge of production. It was brought in October 15, 1930, with an initial production of 650 bbls. daily from Layton sand at 4,919 to 4,942 feet, total depth. Production soon declined and a short time later it was producing 400 bbls. daily. Later, a second well was drilled on the discovery lease, offsetting No. 1 Katscher on the north. Today, the two wells have average pipe line runs of 19 bbls. daily, and the total cumulative production since October, 1930, to date is 180,769 bbls.

Compare those figures with the 33,928-bbl. potential of the newest producer, and the size of No. 2 McConnell will be fully appreciated. Its one-day potential is nearly one-sixth of the total production of the discovery well and its offset over a period of five years and eight months. The McConnell well actually flowed 1,950 bbls. in the first hour of its potential test; 1,497 bbls. the second hour; 1,380 bbls. the third hour, and 1,364 bbls. the fourth hour. Thus, in one hour it flowed three times as much oil as the 24-hour initial production of the discovery well, just 1 mile to the southeast. There is this to be taken into consideration: Production in the discovery well was from Layton sand; that in the McConnell was from second Wilcox sand, topped at 6,207 feet; total depth, 6,305 feet.



—Mid-Continent Map Co., Tulsa.

Continental Oil Co. No. 2 McConnell, in section 28-17-4w, Crescent field, made potential of 33,928 bbls. and was rated as the biggest Oklahoma well of 1936 to date

There was considerable leasing and other activity in the Crescent area as a result of the Layton sand strike, but about that time the depression began to get really depressive, operations slowed down and Crescent was almost forgotten.

INTEREST REVIVED

Carter Oil Co. and Gulf Oil Corp. (then Gypsy Oil Co.) had leased acreage to the north and west of the Eason property. In 1933 those companies decided the time was at hand to further explore the possibilities of Crescent, and started No. 1 Miller, C NE SE section 28-17-4w. On July 26, 1933, it was completed as the Wilcox sand discovery well for Crescent. From that discovery dates the real growth of the Crescent area.

No. 1 Miller had Wilcox sand at 6,120 to 6,141 feet. In the first 24 hours after drilling into the sand, it flowed 5,726 bbls. of oil, and in the next 24 hours it produced 5,430 bbls., with around 5,000,000 feet of gas. Its initial gauge was larger than the first 24-hour gauge of the discovery well at Oklahoma City. It has had a cumulative production of 201,444 bbls. of oil in the three years since it was completed.

That well caused other operators to look upon the Crescent area with favor, and within the week following its completion five other operations had been started around the Wilcox discovery. By the end of August, the Carter and Gulf companies, operating jointly, had three more wells drilling; Sinclair Prairie Oil Co. had three drilling, and Continental Oil Co. was drilling one well. The sceond well to be completed, the Carter and Gulf No. 1 Walker, C NE NE section 33-17-4w, was one-half mile south of the Wilcox discovery. It had Wilcox sand at 6,078 to 6,091 feet and was higher on structure than No. 1 Miller. However, its production was not quite so large. It flowed 2,005 bbls. of oil in the first 24 hours from total depth of 6,114 feet, with 6,000,000 feet of gas. Neither of the first two Wilcox wells were drilled into the sand, but were cored in and produced from 6-inch core holes.

The third Wilcox sand completion was Continental Oil Co. No. 1 McConnell, C SE SE section 28-17-4w, midway between the first two Wilcox producers. Completed late in October, 1933, it had Wilcox sand at 6,118 to 6,150 feet and flowed 5,708 bbls. in 24 hours. All three wells were on a straight line, north and south.

STARTED CONSERVATIVELY

The majority of operators at first favored the drilling of one well in the center of each 40 acres. The Eason company would not agree to that plan of development, however, fought the plan approved by the Federal Planning and Coordinating committee, carried its fight to the higher courts and won. Since then wells have been drilled on 10-acre tracts.

The field was defined on the north by a dry hole on Carter and Gulf acreage in SE SE section 21-17-4w, bottomed at 6,363 feet; and on the west by a dry hole in SE SW NW section 28-17-4w, bottomed at 6,790 feet. It also was limited to the northwest by Sinclair Prairie Oil Co. No. 1 Phillips, NE NE NW section 28, which had Wilcox sand at 6,574 to 6,581 feet, lower than in the wells on the east side of the section, and which produced only 507 bbls. in 24 hours. Further drilling on the west side also was checked when Sinclair Prairie Oil Co. No. 1 Shaffer, NE NE SW section 28, which had Wilcox sand at 6,459 to 6,473 feet, some 400 feet low on structure, and eventually was completed as a 23,000,000-foot gasser in sand at 6,480 to 6,500 feet. This well topped second Wilcox sand at 6,625 feet, cored to 6,637½ feet, encountered salt water, and plugged back. Several wells were drilled along the east side of the field to the north of Eason's Layton sand discovery well, but were small producers and discouraged further drilling in that direction. On the south, the area was defined by the Carter Oil Co. and others No. 1 R. V. Herren, NE NW NE section 4-16-4w, offsetting a small Eason producer to the east. It was dry at 7,191 feet.

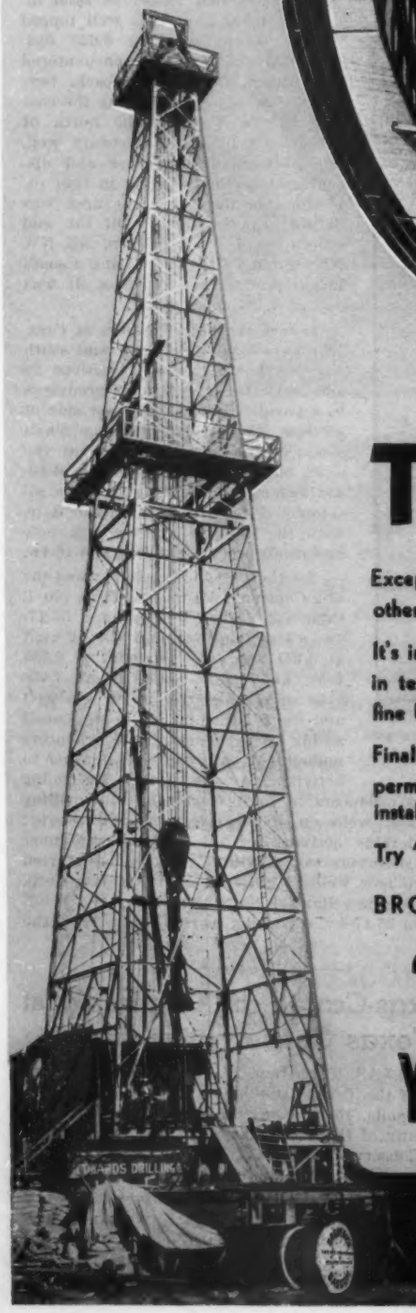
Hence, the big producers at Crescent have been in a north and south line on the east side of sections 28 and 33-17-4w; with smaller producers in a parallel line on the west side of sections 27 and 34. Only one small producer has been completed at the south end of the field in section 4-16-4w. The accompanying map shows all completed wells in the field to date, with the exception of the dry hole and small producer in section 4-16-4w.

Another recent completion was the Mid-Continent Petroleum Corp. No. 3 Campbell, NW SE NE section 33-17-4w, which topped second Wilcox sand at 6,134 feet, was bottomed at 6,255 feet, and made potential of 7,786 bbls. of oil. Completion of this well and the Continental No. 2 McConnell as big second Wilcox sand producers undoubtedly will cause an increase in activity in the field. Deepening of old producers to the second sand and drilling of offset wells on 10-acre locations will provide considerable activity for the pool for the next year, observers say. Drilling already has started at two new wells, Mid-Continent Petroleum Corp. was digging cellar for No. 4 Campbell, SW SE NE section 33-17-4w, offsetting its new producer on the south.

Texas-Canadian Acquires East Texas Conservative Lease

DALLAS, Tex., June 27.—P. D. Bowlen, president of the Texas-Canadian Oil Corp., Ltd., Toronto, Canada, today confirmed the purchase by his company of the Victory lease in East Texas from the Conservative Oil Co. The amount involved in the purchase was stated at $505,000.

The Victory lease in the Evans survey of Upshur County, contains 100 acres with 13 wells now producing. Potentials run from 675 to 725 bbls. per hour per well, it was reported. The purchase gives the Texas-Canadian a total of 109 producers in the three areas of the East Texas field.



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U-8

CONTINENTAL SUPPLY CO.
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Oil News from Foreign Lands

Rumanian Production

The consumption of petroleum products in Rumania during 1935 amounted to approximately 145,103 bbls. This is slightly less than the 148,288 bbls. consumed in 1934 and represents a decrease of 45 per cent from the peak consumption year 1929, when the consumption amounted to 268,198 tons.

RUMANIA

The total production of crude oil in April, 1936, amounted to approximately 5,005,000 bbls., a daily average of 166,800 bbls. Production of the principal operating companies for April, and footage drilled by each, are shown in the following table (oil production in approximate barrels):

	Bbls. prod. Total	Bbls. prod. Daily	Footage drilled
Astra Romana (Dutch-Shell)	919,926	30,664	22,752
Steaua Romana (French)	933,131	31,104	10,731
Romana Americana (Standard Oil of New Jersey)	305,620	10,187	19,334
Concordia (Belgian)	778,022	25,934	9,246
Phoenix Oil (English)	634,193	21,139	13,283
Prahova (Italian)	346,841	8,228	2,489
Credit Minier (French)	256,886	8,563	9,961

California Concession in Sumatra

Standard Oil Co. of California has been advised that the government of the Netherlands Indies has granted an exploration concession in the central part of the island of Sumatra to Netherlands Pacific Petroleum Co. (N. V. Nederlansche Pacific Petroleum Maatschappij), nearly all of the stock of which is controlled by the Standard Oil Co. of California. The concession has an area of approximately 1,482,000 acres. It is on the east coast of Sumatra, about midway between the present oil-producing region of Atjah, at the north end of the island, and the prolific Palembang and Djambia fields, near the south end. The concession gives the Netherlands Pacific Co. the right to conduct geological work and carry on other forms of exploration activity within the area for six years. It is contemplated that a development concession will be issued on such portions of the area as the company may find favorable to the production of oil. Geologists are now at work and have been for some time. The company plans a vigorous program to establish the existence of petroleum in commercial quantities.

EAST INDIES

The concession lies almost opposite the great seaport of Singapore, making it extremely well located with regard to the major steamship lanes in that part of the world.

Netherlands Pacific Petroleum Co. also owns 20 per cent interest in Netherlands new Guinea Petroleum Co., which is carrying on an active exploration campaign in Netherlands New Guinea.

The Koweit Oil Co., Ltd., owned jointly by Gulf Oil Corp. and Anglo-Iranian Oil Co., Ltd., has set surface casing at 107 feet in its first test in Koweit off the Persian Gulf. The company has a large concession there and recently completed geological survey work. The first test will drill several thousand feet if necessary.

Venezuela Gulf Wildcat

The Venezuela Gulf Oil Co. has spudded in a wildcat, which will be known as No. 1 El Tigre, in eastern Venezuela. The test is about 20 miles east of the Oficina area of the company, where the closest tests made in that section are located. The company is prepared to carry the test to several thousand feet. The company's Santa Rosa test in eastern Venezuela has been abandoned at a depth of 6,700 feet, and the rig has been removed. The Santa Ana test is drilling at a depth of 5,200 feet.

VENEZUELA

The Santa Rosa test had showings of both gas and oil but failed to show commercial production in any of the tests. Increased production from Caribbean Petroleum Co., Ltd.'s Mene Grande field and from the La Paz district more than offset reductions in other Venezuelan areas in which subsidiaries of the Royal Dutch-Shell company operate, according to the yield report for four weeks ended June 6.

The Lagunillas field continued as the largest producing area in Venezuela, but its yield of 2,203,200 bbls. for the four-week period represented a decline of approximately 16,000 bbls. from the preceding similar interval. Colon Development Co., Ltd.'s production slumped 38,900 bbls. to total 367,200 for the latest fiscal period. La Paz production gained nearly 3,000 bbls., and the Mene Grande field's output increased to 1,262,200 bbls. for the four weeks, compared to 1,164,600 bbls. during April. The production by Royal Dutch-Shell subsidiaries for the four weeks ended June 6 is shown in the following table:

Company—	Four weeks	Dy. av.
Caribbean Petroleum Co., Ltd.	1,262,200	42,073
Venezuela Oil Concessions, Ltd.:		
Lagunillas field	2,203,200	73,440
La Rosa field	606,800	20,227
Concepcion	99,900	3,030
La Paz	16,100	537
Colon Development Co., Ltd.	*376,200	*12,540
Total	4,646,400	151,546

*Figures for four weeks ended June 6.

Output at Lowest Level

Iranian crude oil production reached the lowest level so far this year during April, according to a report released last week showing the fourth month's yield to be 616,000 tons, or approximately 4,312,000 bbls. The daily average yield was 143,733 bbls. However, for the first four months of 1936, Iranian production was 2,598,000 tons, compared to 2,468,197 tons produced during the first four months of 1935. April's production of 616,000 tons, compares with 584,000 tons produced during the same month in 1935 and 612,000 tons for April, 1934. Production by months so far this year, compared with 1935, is shown in the table below:

IRAN

Month	1936	1935
January	661,000	630,000
February	640,000	587,000
March	683,000	697,000
April	616,000	584,000
Total	2,598,000	2,468,000

It is pointed out in the report issued by the Anglo-Iranian Oil Co., Ltd., that Iranian production fluctuates with the demand and that April production this year is not actually representative of a reduction, due to the month containing only 30 days. However, the table discloses that the rate of production has been cut materially since February.

Spanish Oil Survey

Jose G. Sineriz, chief engineer of the Geophysics Service of Spain, writing in the "Revue Petrolifere," states that a complete geophysical survey of the Spanish provinces has been undertaken in order to determine the country's petroleum possibilities based on the latest scientific methods of exploration. The country was divided into 24 geological zones for the purpose.

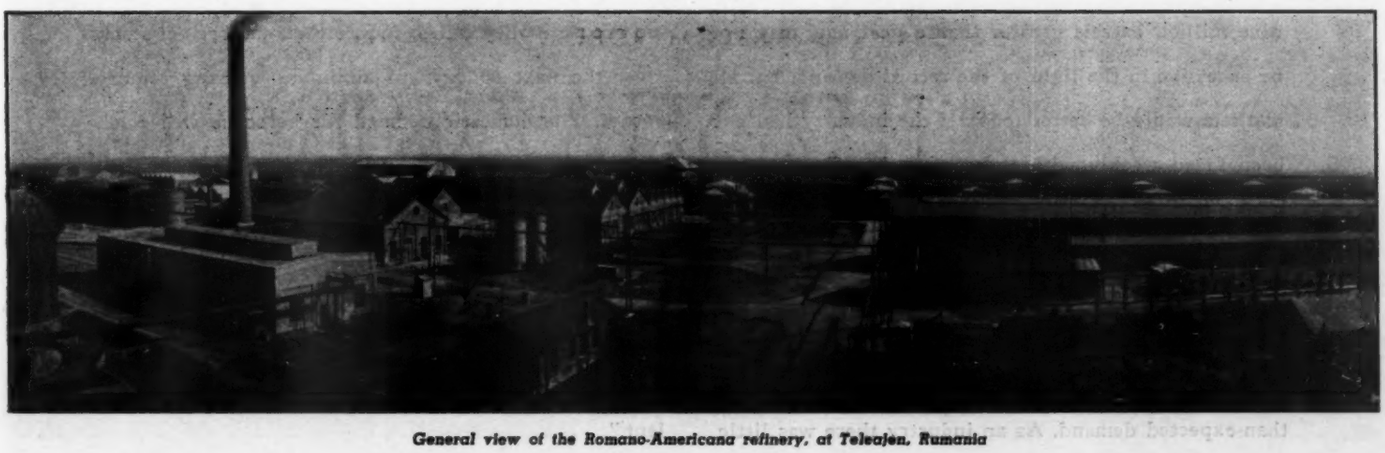
SPAIN

The most favorable indications were found in the province of Burgos, approximately 60 miles from the northern coast. Oil is believed to exist in this area in Cretaceous beds, and seismograph work has indicated the presence of favorable structures. In making the survey, the torsion balance, gravimetric, magnetic and seismograph methods were employed.

Swiss Motor Fuel Imports

The Swiss federal government has agreed that, beginning next fall, permits to import gasoline and benzol for motor vehicles will be made conditional upon the purchase by importers of a maximum amount of 6,000,000 liters 100 per cent alcohol manufactured from domestic stone fruit. This alcohol is to be mixed with the imported gasoline and benzol. It is pointed out that 6,000,000 liters of domestic alcohol represent approximately 2 per cent of the total domestic consumption. This measure is provisional and will remain in effect only for the duration of the government's emergency financial program, that is, up to December 31, 1937.

SWITZERLAND



General view of the Romano-Americana refinery, at Teleajen, Rumania

the OIL AND GAS JOURNAL

PRODUCING REFINING NATURAL GASOLINE PIPE LINE

Published weekly by THE PETROLEUM PUBLISHING COMPANY at Tulsa, Oklahoma

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The Second Half

Oil men closing their books for the first half-year with most figures in black, are asking "What's the outlook for the second half?"

The prudent forecaster who hazards an answer to this query will keep in mind what happened the first six months, realizing there are some hangovers from which recovery is desirable as quickly as possible.

An amazing increase in demand did its best to keep pace with a record expansion in operations. It is fortunate that it did. Gains in shipments of finished products ranged from 5 to 15 per cent, with an overall increase of more than 10 per cent.

Crude inventories at the close of the half-year were about where they were at the start. It would have been better if recommendations had been carried out and burdensome inventories reduced. Gasoline stocks, nine million barrels greater than a year ago, may not be excessive in the light of the record demand, but all markets would be better today if the industry had not been faced weekly with these mounting figures over a long period.

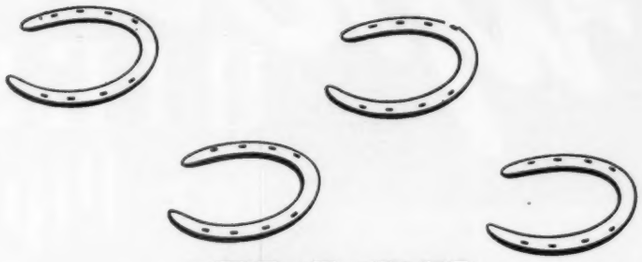
Giving full credit to the heroic efforts of the Interstate Compact states over the past sixty days, the net conclusion from a study of the first half-year is that operators were somewhat lucky, due to the more-than-expected demand. As an industry there was little to brag about and at the same time little to worry about statistically at the start of the home stretch.

Taking as conservative a position as now seems justified it appears certain that the total demand for crude in the United States for the remainder of the year will average more than 3,100,000 barrels daily. With imports continuing around 80,000 barrels daily, there will still be a three-million-barrel demand for domestic crude. The obvious thing to do is to take advantage of this unusual opportunity painlessly to reduce unneeded crude stocks and thus provide the background for prolonged stability.

A percentage gain well under 10 per cent will give refiners and natural-gasoline manufacturers a demand for motor fuels around 265,000,000 barrels for the next six months. With this outlet refineries will have no excuse if they fail to reduce their motor fuel stocks over the next 90 days to minimum working requirements. The domestic demand for kerosene will establish a new record. Fuel oil and gas oil shipments may equal the pre-depression peak.

The oil business is assured a record barrelage and if it keeps its house in order more revenue per barrel. No industry could ask more.

The answer to the original question is, "Excellent."



FLASH

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And you'll win—more gallonage and better profits

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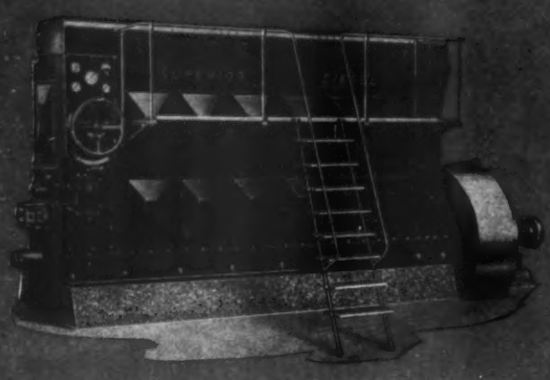

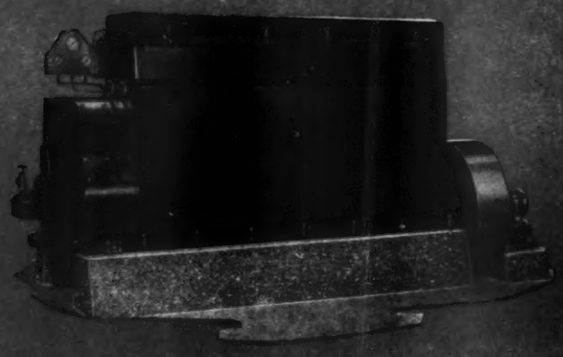

At right: 9" x 12", 130 H. P. to 350 H. P., in 3 to 8 cylinders, speed range under governor control, 200 to 600 R. P. M.

Above: larger sizes in 11½" x 14", 12½" x 15" and 14½" x 18" for powers up to 800 H. P.

* * *

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Small High-Speed Gas Engines For Oil Well Pumping

By J. M. COOPER
Gulf Oil Corp., Houston

During the past few years, small high-speed engines have been used not only as initial equipment on a large number of new pumping wells, but they have also made considerable, if not serious, inroads into the ranks of those wells already equipped with electric motors or slow-speed horizontal engines. The reasons for this are fairly obvious. The oil producer was operating under drastic production restrictions, and faced with an uncertain business outlook. When additional pumping equipment was required, he was faced with the choice between the large outlay of capital for the conventional slow-speed engine with its heavy foundation, building, and transmission equipment, or a small investment for an electric motor which involved signing a power contract, which, because of its rate structure, seemed to make him assume some of the uncertainties of the power company operation in addition to his own. Neither choice seemed wise at that time, and, as a result, many producers turned to second-hand engines as a temporary solution of their problem. When the supply of these was practically exhausted, the small high-speed engine was resorted to as a temporary expedient rather than as a permanent method of production.

Small high-speed gas engines are becoming increasingly popular as prime movers for pumping oil wells. Here the author discusses various types used; paper being read before A.S.M.E. semi-annual meeting, Dallas.

Small multi-cylinder gas engine pumping a well in the deep Oklahoma City field

The purpose of this paper is not so much to criticize the detail construction of these engines, for that is primarily the duty of the designer and manufacturer, but to study and present the advantages, disadvantages, and both economy and continuity of service of this type of engine in actual field use. In this study, it has been found that in many instances incomplete records are being kept of the engine performance, and, unless this is changed, it will not be possible to utilize our present experience to the fullest advantage. From such a study, we may expect to throw some light on the question of whether the use of these engines will continue after improved business conditions have, to some extent at least, removed the incentive for their recent and hasty adoption by the oil producers.

In making such a study it is first necessary to differentiate between three more or less distinct types of engines, all of which fall under the general classification of high-speed gas engines. Briefly then, three types may be defined as, first, converted automobile or truck engines; second, industrial and converted tractor engines, and, third, specially designed heavy-duty pumping engines.

Multi-cylinder gas engine used as power for belt-driven gear reduction pumping unit

CONVERTED AUTOMOBILE OR TRUCK ENGINES

The mass production attained by this type of engine resulted in such low engine and repair parts prices that they were used rather extensively from the start. In a short time, however, two faults developed which, for a time, threatened to eliminate them from pumping service. First, the auxiliary equipment, which was standard equipment on these engines, was not suited to stationary service and continuous duty. Radiators and fans were too small for efficient cooling; clutches were incapable of standing up under constant punishment of the pumping cycle; drive-shaft bearings were not designed to carry the thrust and radial loads imposed by belt drives; carburetors designed for a wide range of speeds and loads, using gasoline as fuel, were not readily adapted to the use of natural gas; and valves, which functioned perfectly on the fuel for which the engine was designed, gave considerable trouble because of sticking and warping when natural gas was used as fuel. The use of oversize fans and radiators, special clutches and clutch bearings, natural gas carburetors, and top cylinder oilers did much toward eliminating these troubles. The addition of a governor was found necessary to prevent the engine from running away when relieved of its load by failure of the transmission equipment. In fact, the automobile or truck engine was gradually converted into a very serviceable little stationary power unit; but this was done at a sacrifice of one of its chief advantages—low price. These auxiliaries which were substituted for standard equipment do not get into mass production, and, consequently, seem high in price. In fact, the parts necessary for this conversion of an

automobile engine sometimes cost more than the basic engine itself.

The second difficulty encountered in the use of automobile or truck engines was due to misinterpreting the engine rating given by the manufacturer. Because of the motoring public's intense interest in acceleration and high car speed, automobile manufacturers have universally rated their engines at practically their peak horsepower and maximum r.p.m., which is usually between 3,000 and 4,000. The oil producer, knowing that these engines are rated at from 80 to 85 horsepower, assumes that the engine will be loafing along on a well load of 20 to 30 horsepower. Engine r.p.m., cubic-inch displacement, fuel, and peak well loads are seldom given sufficient consideration. Let us see how close this assumed 25 horsepower is to the actual engine capacity. Recent field tests on engines of this class were made to determine the effect of r.p.m. on operating costs. On four wells of approximately identical depth, fluid production, and polished rod horsepower, two engines running 1,200 r.p.m. cost nearly four times as much to operate as two engines operating at 900 r.p.m. An increase of 33 per cent in rotating speed produced an increase of 300 per cent in operating costs at the same developed horsepower, and this was done without involving what are considered to be excessive rotating speeds. Assuming then that our 82-horsepower automobile engine is to be run at 900 r.p.m. for most economical service, we find that the peak horsepower at this speed is approximately 22. Allowing 10 per cent for fan, water pump, etc., and 15 per cent for natural gas fuel, this horsepower is reduced to 16.8. Because of the peak loads encountered in the pumping wells, it is not safe to count on delivering this average horsepower throughout the pumping cycle. Allowing 33 per cent for peak load, which is a safe average for a correctly counterbalanced well at normal pumping speeds, we find that our 82-horsepower engine is capable of giving economical service on oil-well loads up to 11.2 horsepower. It is very interesting to note that this conservative oil-well pumping rating is approximately one-half of the S.A.E. horsepower rating, or approximately 1 horsepower for 20 cubic inches of piston displacement. This oil-field rating may appear to be too conservative, but an increasing number of operators are finding at their own expense that while high speed has its advantages, excessive speeds should be resorted to only where unusual conditions demand it, and where higher operating costs will be offset by other advantages gained. This trend is clearly shown by an inspection of the engines in actual operation, most of which are now governed at from 800 to 1,000 r.p.m.

These changes in auxiliary equipment and rating have largely eliminated the early trouble with automobile engines in pumping service, but, as shown in the typical specification table No. 1, the automobile engine has lost its identity and must be classified with other light-duty engines of the industrial or tractor type.

LIGHT-DUTY INDUSTRIAL AND TRACTOR ENGINES

These engines, as a class, are similar in design and capacity to the automobile engine except that nearly all of them are four-cylinder models. Some of these engines, in common with some of the automobile-type engines, can be exchanged for factory reconditioned engines when major repairs are indicated. The typical specifications of this type of engine are given in table No. 1.

These engines, as well as the automobile engines, are of sufficient capacity to handle a large per cent of the pumping wells in this district, and, at the same time, are compact enough and smooth enough in operation to require only a simple and inexpensive foundation. Because of their light weight and compactness, they can be removed from the well, when major repairs are necessary, and this work done in a shop, leaving only adjustments and minor repairs to be done at the well. If conditions warrant it, a number of spare engines can be kept on hand and one of these can be installed at the time the bad-order engine is removed. These features make it, within its load capacity, a direct competitor to the electric motor as the prime mover best adapted to the modern self-contained pumping unit, and, together with its low first cost, account for its widespread use in the last few years. These same features, however, are indicative of a shorter life than the old slow-speed engine. On first consideration this may seem to be a decided disadvantage, but if the engine will give reasonably trouble-free service during its life, and if the total cost of engine replacements over a long period of time will not exceed the repair costs and ultimate replacement of the slow-speed, heavy-duty engine, then a relatively short life may have its advantages. For example, it will remove the factor of obsolescence, as each successive engine used for replacement can be of the current model if worthwhile improvements have been made. In addition, it permits the change to electric motor or other types of prime movers at these replacement periods without loss of capital investment, if well conditions, or economic conditions, make such a change advisable.

TABLE 1—APPROXIMATE CHARACTERISTICS OF HIGH-SPEED PUMPING ENGINES

	Converted automobile engines	Light industrial and tractor engines	Heavy-duty converted industrial engines	Special heavy pumping engines	
				Small	Large
Number of cycles	4	4	4	2	2
Piston displacement	220	220	530	...	...
Rated r.p.m.	3,800	1,500	1,100	550	500
Rated horsepower	80	30	50	25	40
Recommended r.p.m.	900	900	900	500	400
Recommended horsepower	11	12	30	20	35
Diameter of crankshaft, inches	2	2	3	3½	4
Approximate pounds per recommended horsepower	97	70	75	170	150
Approximate cost per recommended horsepower	$34.00	$38.00	$41.00	$53.00	$44.00

In regard to the trouble-free service between overhauls, this investigation has revealed few records of any value on engines now in operation. This is, of course, due to the fact that under proration restrictions shut-down time is of little importance. Even if records were kept of actual repair time, it would be of little value because, under present conditions, repairs are made with every consideration to cost and no consideration to time. Frequently, a job which might be rushed through in a few minutes will be trifled with for hours, or done piecemeal at odd times between routine duties. This situation is unfortunate, as the time will eventually come when down time will again be at least as important as repair costs. It is suggested that field tests be conducted by the operators to determine the time actually required for each type of engine trouble, in some such way as garages have a definite schedule for a certain job, and these time values be assigned to each trouble report. In this way much light will be thrown on a question which should be answered as soon as possible.

In regard to the total cost of engine repairs and replacements, a good deal of reasonably accurate data are now being kept, and we must wait a sufficient period of time for the cycle of engine repairs and replacements to be complete. In the meantime, the following forecast is offered. Accurate records on 38 pumping-engine installations of this type, with service periods ranging from 19 days to 948 days, and averaging 293 24-hour days, show an average miscellaneous repair cost of $4.48 per engine per month. Not included in this cost are seven major overhaul jobs. Two of these overhaul jobs occurred at 150 and 147 days, respectively, and were due to running the engines over their recommended speed. One additional overhaul job occurred at 200 days, due to intentional overload. Discounting these jobs, we find that the four normal jobs averaged 441 days each, with a minimum of 408 and a maximum of 474 days. Using this figure of 441 days, we find that of the 31 remaining engines, six, or 19 per cent, have now exceeded this amount of service by an average of 57 days without need of an overhaul. Apparently then, our average of 441 days, or 14½ months, will turn out to be conservative.

It is reasonable to assume that two of these overhaul, or exchange, jobs can be performed on an engine before it is unfit for further use, and will require complete replacement. Based on an average of $125 for a complete overhaul, and $425 for a new engine, we can then anticipate a total overhaul and replacement cost of $675 in 1,323 days, or 43½ months. On a per month basis, this amounts to $15.52 per month, and, together with the average of $4.48 per engine for miscellaneous repairs, gives a total for engine repairs and replacement, which might be called depreciation and obsolescence, of $20 per engine per month, based on 24 hours' operation per day.

To some who have been operating this type of engine for a short time, this figure may seem too high. For example, on the entire group of engines referred to above, the 38 engines have average 293 days' service at a total repair and replacement cost of $8.31 per engine per month. A careful analysis of the records, or, better yet, a survey of the physical conditions of the engines themselves, will show that many of them are close to the time when they will require a major overhaul. In other words, a repair bill has been accumulating in the field which will not show up as an actual cost until the cycle of overhaul and replacement has been completed.

For well loads of 25 to 30 horsepower, a number of heavy-duty pumping engines have been available for some time which are similar in many ways to the light-duty engines as discussed above. Averaging about 525 cubic inches displacement, they are somewhat heavier and more expensive on a horsepower basis than the smaller engines. Most of them employ removable cylinder liners, a heavy cast-iron base and crankcase combined, and are designed for a longer useful life. Because of their relatively high cost, and because of the small number of wells requiring a prime mover of this capacity, only a few of these engines have been installed. In the absence of comprehensive repair cost data, it is assumed that they will compare favorably with the smaller engines on a basis of horsepower developed. Designed to give continuous service with fewer shutdowns, they sacrifice to some extent, the portability of the smaller units, and, because of this, and the higher costs of spare units, it is likely that more of the repair work will be done at the well.

SPECIALLY DESIGNED ENGINES

Very recently a number of pumping engines have been introduced which are on the border line between slow and high speed, and which possess many of the advantages of each. These engines weigh nearly twice as much per recommended horsepower as other high-speed engines, and thus are designed for long life at speeds of 400 to 600 r.p.m. At these speeds they are recommended for pumping loads of 27 to 41 horsepower. They are usually two cylinder, and, with one exception, they are two cycle, instead of four, and are designed for either natural gas or fuel oil but convertible to either. In spite of their weight, their vertical cylinders make them compact enough to be used easily on self-contained pumping units, and require only a simple foundation. Actual operating costs on these engines will not be available for some time due to the long service life expected from them. This means that overhaul and depreciation, the major items of expense, must be estimated. At the present time, pumping experience has not progressed to a point where even an approximate estimate can be made. In the meantime, accurate records should be kept of shut-down time. It is in this respect that this type of engine will be expected to prove superior to the light-weight, four-cycle, engine, and it is in this respect that both types of engines must eventually compete with electrical motors for a lasting place among accepted pumping equipment.

Oil Companies Build Roads

Oil companies operating in the new Oklahoma City field improve the roads into the Mansion area as they go—with oil saturated sand taken directly from the wells. The sand is hauled from the wells in dump trucks and placed on the streets.

FOR MAXIMUM RECOVERY AND REDUCED LIFTING COSTS

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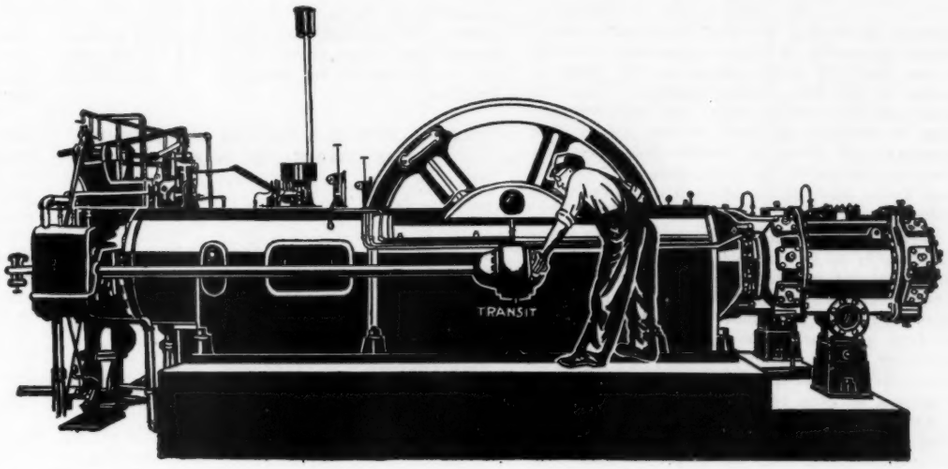

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Gulf Treating Lubricating Stocks From Various Crudes in New Solvent Unit

By GEORGE WEBER

The current aim of refiners to improve lubricating oil quality through use of solvent extraction is being successfully achieved by the Gulf Oil Corp. employing the Multi-Sol process at its Port Arthur refinery. Since the initial operation of the plant, an extensive program of research has been carried out by Gulf engineers, and favorable results have been obtained in treating stocks from many Gulf Coastal, West Texas, East Texas and other Mid-Continent crudes.

Formerly the value of lubricating stocks was judged solely by the proportion of paraffinic compounds present in the crudes. Research on the chemical constitution of lubricating oils has since indicated that the paraffinic compounds present in any type stock will make good lubricants provided they can be sufficiently separated from the undesirable naphthenic components also present. In support of this, results obtained by the Gulf Oil Corp. show that not only are good Mid-Continent mixed base lubes improved to compare with Pennsylvania oils, but the paraffinic fractions present in many naphthenic type crudes, heretofore disregarded as lube oil material, can be commercially refined to yield oils of good lubricating characteristics.

Improvements from Multi-Sol treatment of two types of stocks are illustrated in Tables 1 and 2.

Separation of the naphthenic and paraffinic components of a paraffin type stock is best shown by comparison of the viscosities of the two fractions (Table 1). The charge, having a viscosity of 315 Saybolt seconds at 100° F. is separated into a raffinate fraction with a viscosity of 203 and an extract showing the high viscosity of 2,768 seconds. Concentration of these tarry constituents in the extract phase is further shown in the viscosities of the products at 210° F. At this temperature, the raffinate has a viscosity of 47 compared with 76 in the extract. The viscosity index, determined by the variation of viscosity with temperature, indicates the true lubricating value of the raffinate. A decided improvement in the V.I. of the charge is illustrated in the increase from 67 to 103 in the refined oil fraction.

Removal of the naphthenic constituents reduced the carbon residue of the refined oil from .08 per cent to .02 per cent. Sulfur content is cut to .12 per cent as compared with .32 per cent in the charge, and increased stability of the refined fraction is seen in an iodine number of 6.1 against 12.4 for the untreated oil. Neutralization number is also reduced, from .29 to .004 and color of the paraffinic fraction is improved appreciably, an important asset from the marketing angle. An inspection of the results derived in treating a naphthenic type charge, shown in Table 2 reveals similar improvements in properties of the refined fraction.

TABLE 1—TYPICAL PROPERTIES OF PARAFFINIC TYPE CHARGE AND PRODUCTS

Description	Charge	Raffinate	Extract
Inspection:			
Gravity: °A.P.I.	28.6	29.9	18.6
Viscosity, S.U.V.			
100° F.	315	203	2768
210° F.	50.2	47	76
V-G constant	0.860	0.820	....
Viscosity index	67	103	....
Flash, P.M.: °F.	420	395	410
Flash, O.C.: °F.	420	410	415
Pour: °F.	+30	+40	+15
Color, N.P.A.	3.5 dil.	2.25	dark dil.
Color, Tag-Robinson	1.25	11.75	....
Sulfur (B): %	0.32	0.12	0.34
Carbon residue: %	0.08	0.02	0.86
Neutralization No.	0.29	0.004	0.45
Iodine No. (Mod. Hanus)	12.4	6.1	18.0

The viscosity index is raised from 31 in the charge to 67 making this raffinate comparable in quality to stock from a paraffinic type crude. Carbon residue, sulfur content and iodine and neutralization numbers are materially reduced, and the color is greatly improved in the paraffinic fraction. The refinements in stocks of both types are obtained at a minimum of waste, since the naphthenic fraction finds a ready market as fuel oil.

The Multi-Sol process employs furfural as the selective solvent. The properties of this compound make possible much simplification in the design of an extraction plant. Due to a high specific gravity, the furfural is easily adapted to counter current extraction in a packed column, the most efficient and simplest of extraction methods. Chemical stability of furfural throughout a wide temperature range facilitates higher temperature operation with increased efficiency. The solvent is readily stripped from both oil phases after extraction, and the fact that it is non-toxic and available at low cost constitute other important factors in its successful application to solvent refining.

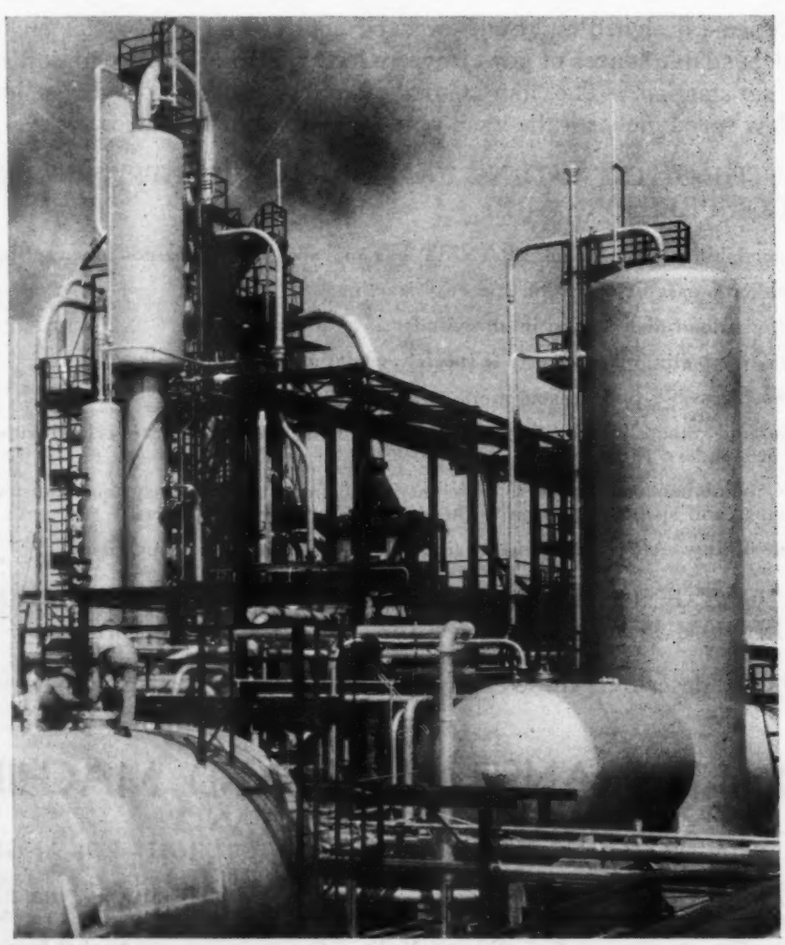
Several improvements in the furfural process have been incorporated in the new Multi-Sol plant designed by engineers of the Gulf Oil Corp. and the Lummus Co. An important refinement is the installation of an additional settling stage following the extraction, facilitating a sharper separation of the two phases and allowing greater flexibility by recycling of the mixture to the extractor.

Another improvement is the utilization of exchange heat in removing 40 per cent of the solvent from the extract mixture in a furfural tower. This step relieves the extractor tower and stripper of a large share of the furfural removal at no additional heating cost.

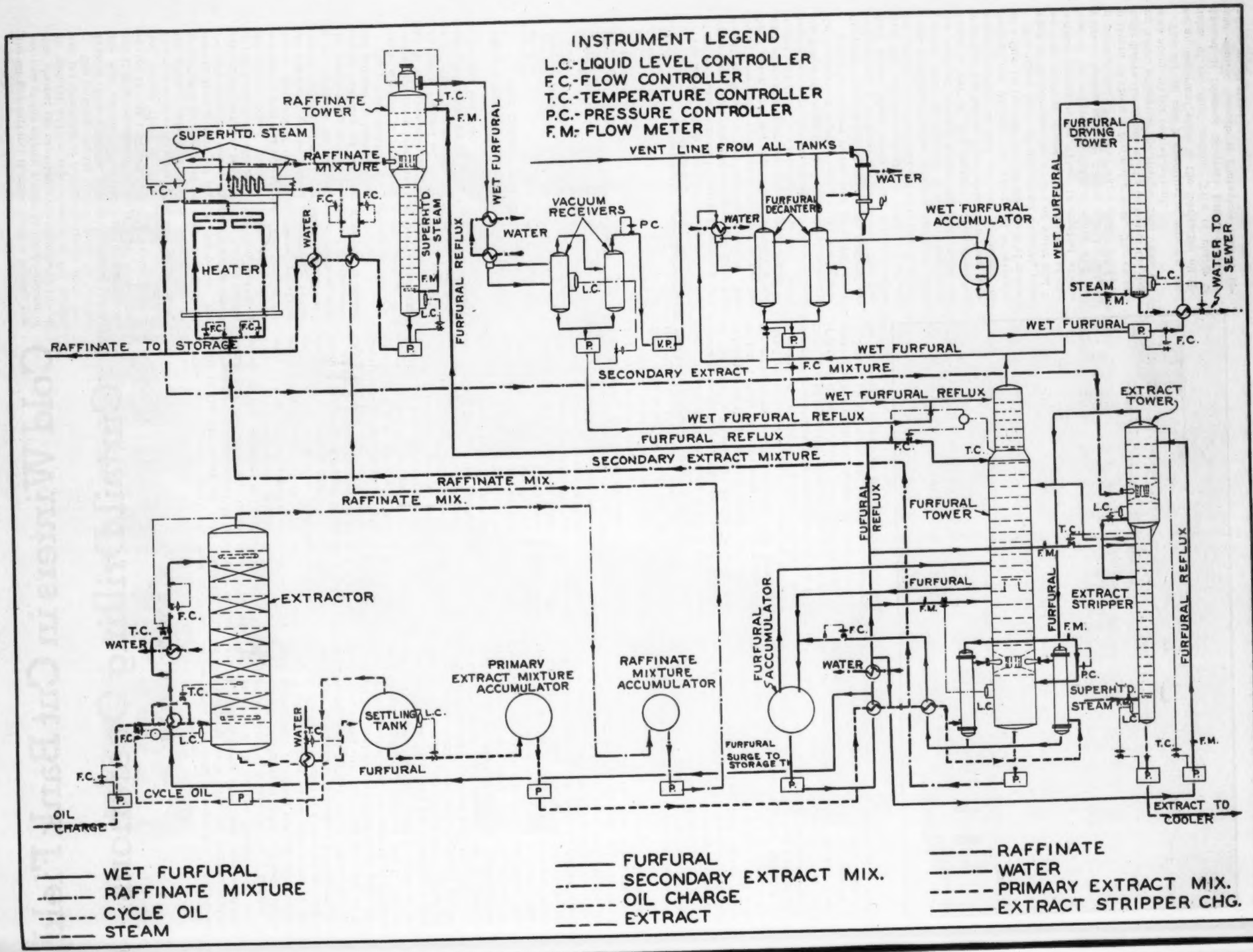
Heating of the two phases for solvent stripping is done in one furnace instead of the usual two heaters. In this unit, the extract mixture is passed through the radiant section and the raffinate through the convection section. A fan was installed at the entrance to the convection section to aid in adjusting the heat exchange to each mixture. Design of the banks in both sections, however, has resulted in proper heating for each mixture without use of the fan.

Space efficiency is a feature of the entire layout of the plant. Operation is controlled completely by instruments guaranteeing smooth operation on the many types of charge processed in the unit.

Operation of the Multi-Sol plant is traced in Figure 1. Hot solvent from the accumulator is passed through an oil charge exchanger and water cooler and is charged at a controlled temperature to the top of the extractor; the oil charge enters the bottom section after similar temperature control. The ratio of charges is fixed at 2.5 parts of solvent to 1 part of oil. Countercurrent flow of



View of the furfural solvent extraction unit of the Multi-Sol plant at the Port Arthur, Tex., refinery of the Gulf Refining Co. in which lube stocks from various crudes have been successfully treated


INSTRUMENT LEGEND
L.C.-LIQUID LEVEL CONTROLLER
F.C.-FLOW CONTROLLER
T.C.-TEMPERATURE CONTROLLER
P.C.-PRESSURE CONTROLLER
F.M.-FLOW METER
RAFFINATE TOWER
SUPERHTD. STEAM
RAFFINATE MIXTURE
HEATER
RAFFINATE TO STORAGE
WET FURFURAL
FURFURAL REFLUX
VACUUM RECEIVERS
VENT LINE FROM ALL TANKS
FURFURAL DECANTERS
WET FURFURAL ACCUMULATOR
FURFURAL DRYING TOWER
WATER TO SEWER
STEAM
SECONDARY EXTRACT
F.C MIXTURE
WET FURFURAL REFLUX
EXTRACT TOWER
SECONDARY EXTRACT MIXTURE
RAFFINATE MIX.
EXTRACTOR
FURFURAL TOWER
FURFURAL ACCUMULATOR
EXTRACT STRIPPER
SETTLING TANK
PRIMARY EXTRACT MIXTURE ACCUMULATOR
RAFFINATE MIXTURE ACCUMULATOR
FURFURAL SURGE TO STORAGE TK
CYCLE OIL
OIL CHARGE
EXTRACT TO COOLER
WET FURFURAL
RAFFINATE MIXTURE
CYCLE OIL
STEAM
FURFURAL
SECONDARY EXTRACT MIX.
OIL CHARGE
EXTRACT
RAFFINATE
WATER
PRIMARY EXTRACT MIX.
EXTRACT STRIPPER CHG.

the oil and furfural through the five raschig ring sections of the column results in the formation of two phases; the naphthenic constituents of the oil in furfural solution concentrating at the bottom, and the paraffinic or raffinate mixture at the top.

The primary extract mixture from the settling tank is composed of 85 per cent furfural and 15 per cent extract. The first step in solvent removal is accomplished in the furfural tower. The charge to this tower is heated by exchange with hot solvent from the accumulator and extract tower in four exchangers. The heat picked up by the primary extract mixture in these exchangers is sufficient to remove 40 per cent of its furfural content from a draw-off plate in the tower. The bottoms from this tower, designated as secondary extract mixture, are heated in the radiant section of the furnace and charged to the flash section of the extract tower. Here the extract is further denuded of furfural which passes overhead as dry vapor. Bottoms of the extract tower containing the remainder of the solvent pass directly to the extract stripper below. Superheated steam charged to the bottom of the stripper passes overhead with the furfural vapors, and the stripped extract containing less than .04 per cent of solvent is cooled and pumped to storage.

The solvent leaving the extractor in the raffinate mixture is recovered in one step in the vacuum raffinate tower and stripper. After heating in the convection section of the furnace, the mixture is charged to the tower under a vacuum of 27" Hg. The finished raffinate stripped with steam is withdrawn at the bottom of the stripper containing less than .02 per cent of furfural.

TABLE 2—TYPICAL PROPERTIES OF NAPHTHENIC TYPE CHARGE AND PRODUCTS

Description	Charge	Raffinate	Extract
Inspection:			
Gravity: °A.P.I.	21.3	25.8	10.3
Viscosity, S.U.V.			
100° F.	385	287	3970
210° F.	50.5	49	79
V-G constant	0.876	0.844	....
Viscosity index	31	67	....
Flash, P.M.: °F.	345	340	390
Flash, O.C.: °F.	350	360	390
Pour: °F.	—30	—20	+30
Color, N.P.A.	2 25 dil.	3 75	....
Color, Tag-Robinson	2.12	8.5	....
Sulfur (B): %	0.29	0 21	0 49
Carbon residue: %	0.11	0.04	0.83
Neutralization No.	0.44	0.03	1 22
Iodine No. (Mod. Hanus)	12.5	9.1	17.8

The solvent which composed about 15 per cent of the raffinate mixture is removed overhead with steam from the tower and stripper, and after condensation, flows to two vacuum receivers. The liquid from these receivers is refluxed to the furfural tower, and the vapors pass through a vacuum pump and enter the closed system which includes vent lines to all tanks in the unit. These vapors are partially condensed in water coolers, the liquid returning to the wet furfural cycle and the uncondensed vapors venting to the atmosphere.

Water introduced to the unit as steam is continuously removed by means of two furfural decanters and a furfural drying tower. The furfural tower, which receives wet furfural reflux from the raffinate and extract strippers, returns dry solvent to the furfural draw-off plate and produces a constant boiling mixture overhead. This together with the constant boiling mixture from the furfural drying tower discussed below is cooled to 100° F. and charged to two decanters in series. The bottom layer withdrawn from these vessels consists of 93.5 per cent by weight of furfural and 6.5 per cent water and is returned as reflux to the top tray of the furfural tower.

The upper layer of the second decanter, composed of 91 per cent by weight of water and 9 per cent furfural passes to the top tray of the furfural drying tower. Heat is supplied at the base of the column by exhaust steam, and the constant boiling mixture, 35 per cent by weight of furfural and 65 per cent water passes overhead to return to the wet furfural system. The excess water leaves the system at the bottom of the drying tower, preheating the charge. This waste contains about .05 per cent of solvent.

This solvent unit is operating at capacity, filling an important place in the lubricating oil division of the Gulf system. Type of charge is changed at frequent intervals, but close instrument control throughout guarantees smooth operation at all times.

Cold Winters in Cut Bank Field Curtail Drilling Operations

By T. ROBERT INGRAM

One hundred miles north and west of Great Falls is the Cut Bank oil field. Although the Kevin-Sunburst area, about 25 miles east of Cut Bank, was shut down last winter because of the severe storms, operators in Cut Bank managed to keep going through it all. Several strings of tools were running all winter, and at least one rotary rig was kept in operation all the time in temperatures as low as 40° below zero. The greatest problem, outside of getting to and from the rig, was in maintaining a water supply to operate a rotary.

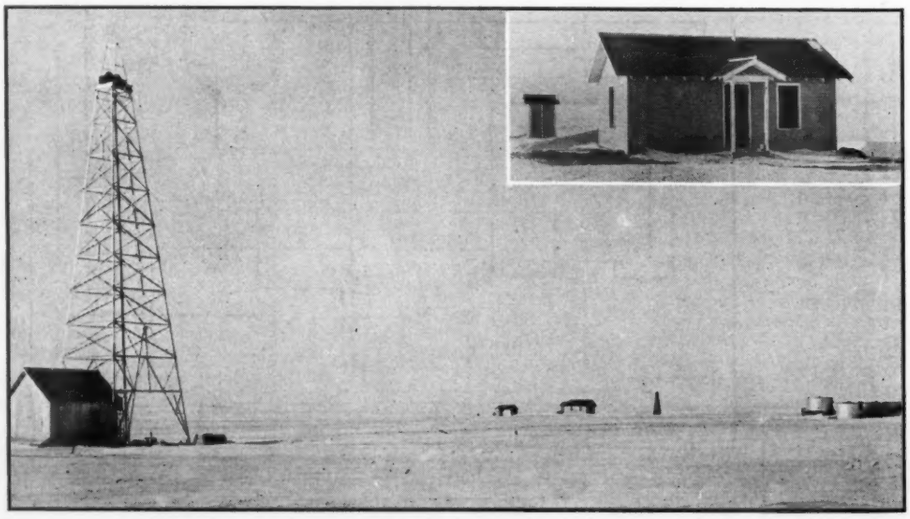
Water is usually pumped from one of the creeks which flow into the Cut Bank River or from the river itself and sometimes must be transported for more than a mile. As a well usually is drilled by rotary in 20 days from rigging up to tearing down, it would be out of the question to bury the water lines deep enough to prevent freezing. On one job operators found a well which produced enough warm water to keep the lines open as long as the water was flowing. On another job, after the hands had spent several days tearing up a 2-inch line and replacing it with 3-inch, which would soon freeze and have to be replaced with another 2-inch, it was found that two gas flares placed along the line about a quarter of a mile apart kept the water flowing. Another flare was kept burning at the suction of the water pump. With this arrangement the rig was kept running until the creek finally froze solid after three successive days in which the thermometer stayed around 30° below. This was in March, and the creek soon thawed enough to furnish water again.

Digging is comparatively easy in the Cut Bank field, wells being drilled to the top of the lower Cut Bank sand, at from 2,800 to 3,000 feet, with very little mud and using all the weight. Formations are almost flat, so there is rarely any concern about a crooked hole. The only weight indicator in the field is broken and cannot be used. Just before setting the production string it is customary to run a Syfo to make sure the hole will fulfill the contract for a 5-degree hole. The formations stand up well and a small amount of bentonite encountered in drilling makes the mud heavy enough for operations. In some parts of the field there is a little trouble with cavings, but 10 sacks of cement sifted in around the suction thickens the mud enough to clean out the hole in good shape.

Nearly all the wells are on the pump, producing an average of 40 bbls. per day. Texas Co. has a few wells producing with gas lift, but these and a few scattered wells with the derricks standing are the only derricks other than those on drilling wells to be seen. Of the few flowing wells in the field Santa Rita Oil & Gas Co. No. 1 Lander, on the west side in section 16-35-6w, was probably the most sensational. It drilled through the Sunburst sand, which produces oil in only three or four wells in the field, in spite of a show of gas and oil in the pit, in an effort to make a well in the Cut Bank sand about 50 feet lower. When the Cut Bank was found dry, pipe was shot off at the Sunburst preparatory to pulling it. A good sized flow of oil spouted out, but instead of dropping back as was expected, it kept on, and it was several hours before the flow could be directed into emergency tanks. The well has produced as high as 2,000 bbls. per day, the record for the field, but offsets to the north, east and southeast encountered either no Sunburst sand or it was dry.

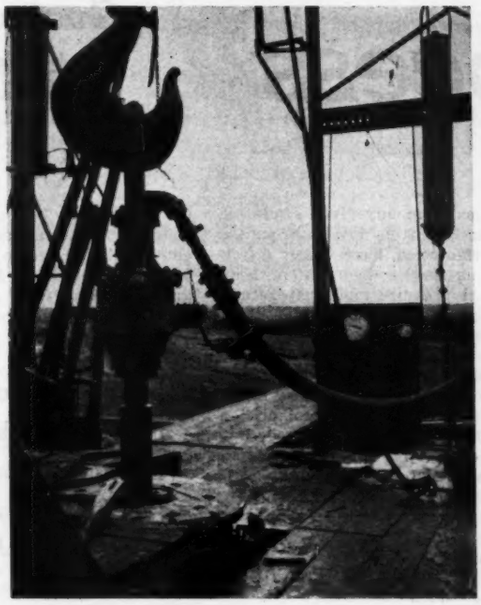
The Cut Bank sand, encountered at 2,800 to 3,000 feet, is the principal oil sand. The Sunburst, from 20 to 50 feet higher, has produced very little crude. Minor showings of oil and some small gas production have been found in a Blackleaf member in the lower part of the Colorado shales at around 2,400 feet. These showings have not been commercial, although some of the wells produce as much as 3,000,000 feet of gas, which frequently can be saved for lease fuel. Below the Cut Bank the Ellis-Madison lime has been tested and found wanting. As the lime slopes off gradually into Turner Valley, Alberta, it becomes a producer of naphtha.

As the field is many hundreds of miles from the big markets, it is difficult to find an outlet for all the crude produced. British-American Oil Co., Ltd., has contracted for about half of the production of the field, which it transports through its subsidiary, Toronto Pipe Line Co., to Coutts, Alberta, where there are loading racks and a refinery. Some oil is used at the Cut Bank refinery and some at the International Refining Co. plant at Sunburst. A new gathering line connecting with 16 producers is being laid now preparatory to constructing a 100-mile line to Great Falls, where the Home Oil & Refining Co. has a new Dubbs cracking unit. The new line is expected to relieve the marketing situation greatly, although it will handle only production of Nadeau Brothers and Cobb and Pardee.



Typical winter scene in the Cut Bank where temperatures of 40 degrees below zero are not uncommon

CHAMPION



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The Modern Cracking Process

By

Gustav Egloff and

Edwin F. Nelson

Research Laboratories,
Universal Oil Products Co.

In continuation of a treatise on modern cracking presented before the World Power Congress, London, the authors discuss the correlation of physical properties of petroleum and engineering design. The first portion appeared in the June 2 issue of The Oil and Gas Journal.

Petroleum fractions from any given crude oil, and particularly fractions from crudes from the different sources of the world, have widely different properties such as specific heat, latent heat, vapor volume, critical pressure and temperature, and rates of decomposition. To determine these properties on any oil to be used for a given installation would be an extremely lengthy and costly procedure. At the same time it is important that these properties be accurately known as they effect the design of each piece of equipment comprising a distillation or cracking unit.

The range of types of oil available for cracking is generally considered to be such that paraffinic oils give the higher yields of gasoline and are at one extreme and aromatic oils are at the other, with a wide variety of types in between. A number of means have been employed to classify an oil as to either its paraffinicity or its aromaticity, most common among which are viscosity index, molecular weight, aniline point and hydrogen content. Each of these has been used for particular design problems as they are not all applicable over a wide boiling range petroleum fraction. In order to maintain a more definite means of characterizing any particular oil as to its crackability, the U.O.P. characterization factor has been worked out and correlated with many of the above means previously used for correlating oils.

CHARACTERIZATION OF PETROLEUM

For general correlation of the average physical properties of petroleum stocks of different types, it is necessary to develop a means of quantitatively expressing the general character of an oil to be cracked. Paraffin hydrocarbons of maximum hydrogen content may be considered as one extreme, and aromatic materials of minimum hydrogen content as the other.

To serve as a quantitative index to this property, which may be termed paraffinicity, the U.O.P. characterization factor [2, 3] has been developed and empirically related to six commonly available laboratory inspections. Although this factor is not an exact measure of chemical type and does not show perfect constancy in a homologous series, these disadvantages are, to a considerable extent, offset by its simplicity and convenience of definition and use.

The definition of the U.O.P. characterization factor arose from the observation that when a crude oil of supposedly uniform character is fractionated into narrow cuts, the specific gravity of these cuts is approximately proportional to the cube roots of their absolute boiling points. The proportionality factor may then be taken as indicative of the paraffinicity of the stock. Thus

$$K = \frac{\sqrt[3]{T_B}}{S} \qquad (1)$$

where,

K = U.O.P. characterization factor.
T_B = Average boiling point, °R = °F. + 460.
S = Specific gravity at 60° F.

When dealing with mixtures of wide boiling range a special method of obtaining the average boiling point as described by Watson and Nelson[2, 3] must be used. For narrower cuts the Engler 50 per cent point may be taken as the average boiling point.

The characterization factor shows fair constancy throughout the boiling range of a number of crude oils and for others may either increase or decrease in the higher boiling range. In the paraffin series fair constancy for the average of the reported isomers exists up to a boiling temperature of 700° F. Values of the characterization factor range as follows:

Pennsylvania stocks, 12.2-12.5.
Mid-Continent stocks, 11.8-12.0.
Gulf Coast stocks, 11.0-11.5.
Cracked gasolines, 11.5-11.8.
Cracking plant combined feeds, 10.5-11.5.
Recycle stocks, 10.0-11.0.
Cracked residuums, 9.8-11.0.

The characterization factor is readily calculated from equation (1) from only the specific gravity and average boiling point. It may be read directly from A.P.I. gravity and average boiling point by interpolation between the curves of Figure 3. In this figure, A.P.I. gravities are plotted as ordinates and average boiling points as abscissas with lines of constant K from equation (1).

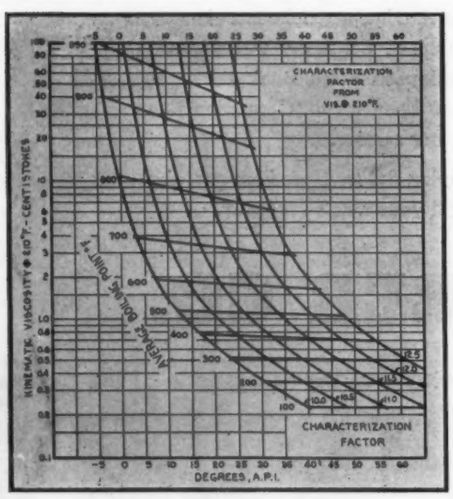

Fig. 4—Characterization factor

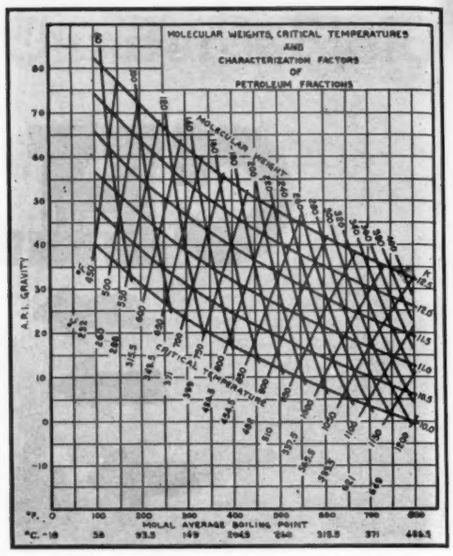
MOLECULAR WEIGHTS, CRITICAL TEMPERATURES AND CHARACTERIZATION FACTORS OF PETROLEUM FRACTIONS
A.P.I. GRAVITY
MOLECULAR WEIGHT
CRITICAL TEMPERATURE
MOLAL AVERAGE BOILING POINT

Fig. 3—Physical constants

CHARACTERIZATION FACTOR FROM VISCOSITY AND GRAVITY

It has been found[4] that a fair empirical correlation exists between the characterization factor and the viscosity-gravity relationship at a given temperature. Paraffinic stocks have high viscosities as compared to aromatic materials of the same gravities.

Because of uncertainties of molecular aggregation at low temperatures, the viscosity measure-

[4]Watson, Nelson and Murphy, Ind. Eng. Chem. 27, 1,460 (1935).

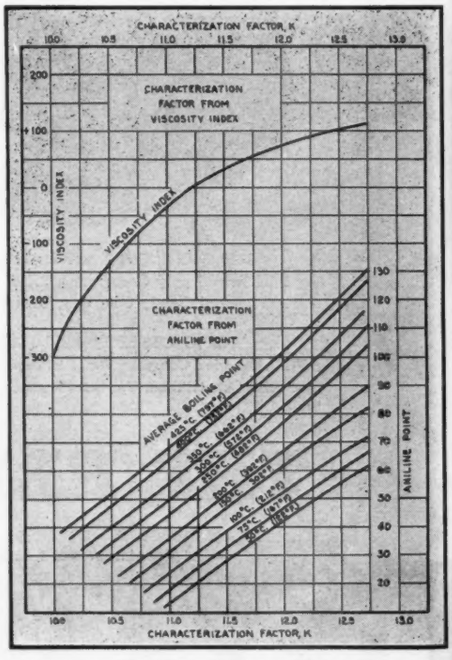

Fig. 5—Characterization factor as related to viscosity index

[2]Watson and Nelson, Ind. Eng. Chem., 25, 880 (1933).
[3]Watson, Nelson and Murphy, Ind. Eng. Chem., 27, 1,460 (1935).

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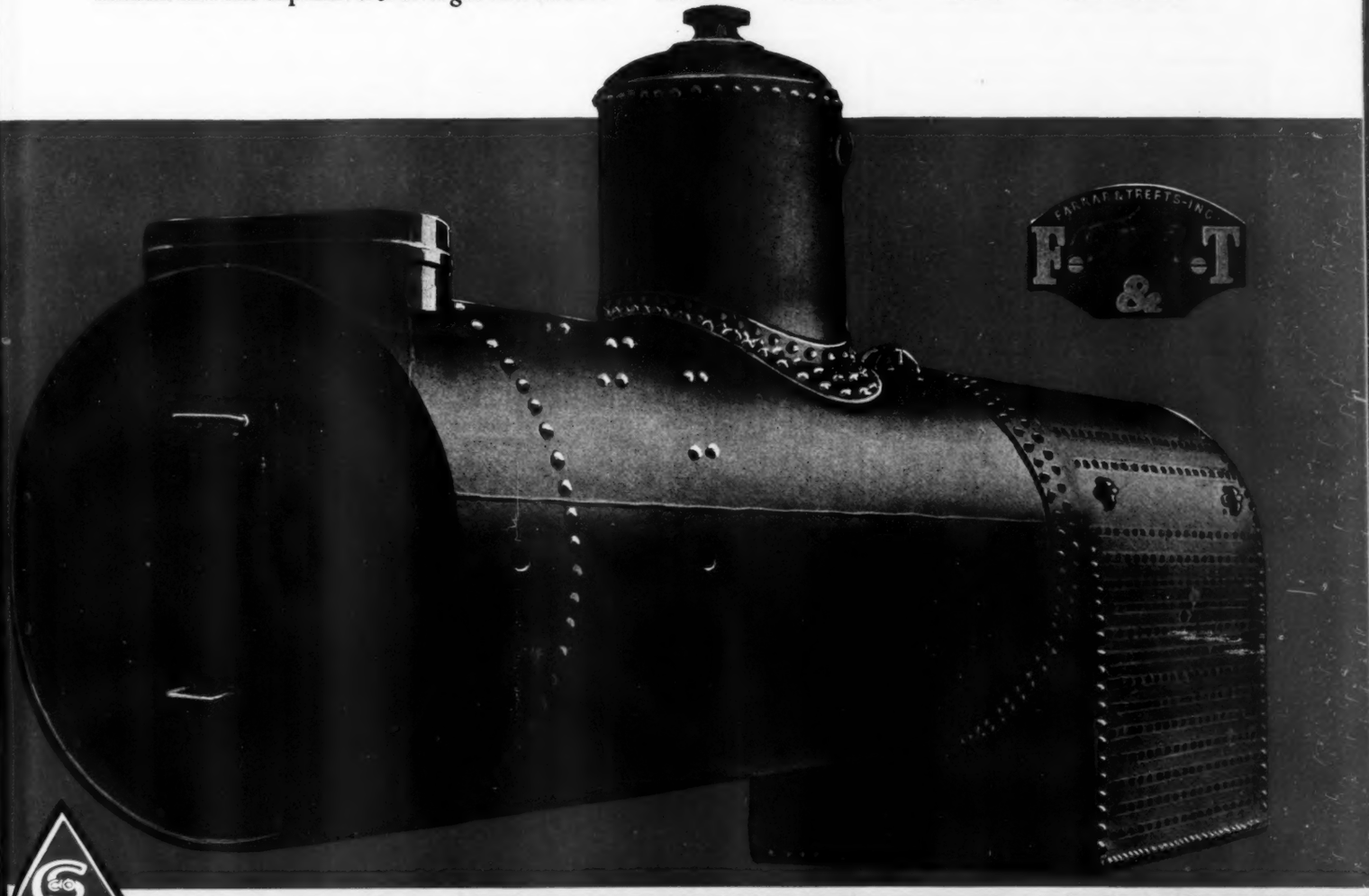


"SERVING THE OIL AND GAS INDUSTRIES"

CONTINENTAL

ments used for physical correlations should be made at as high a temperature as possible. In Figure 4 viscosity in centistokes at 210° F. is plotted against A.P.I. gravity for stocks of constant characterization factors. By use of the centistoke scale of viscosity the entire range of fractions from light gasolines to heavy residues is covered in a single relationship.

Lines of constant boiling point are plotted on Figure 4 resulting from combination of the relationship between characterization factor from boiling point and viscosity data. These lines permit an approximation to the boiling point from only viscosity and gravity data. This relationship is particularly useful in the case of heavy stocks on which boiling point data can be obtained only under high vacuum. However, because of the rapid change in viscosity with a slight change in the gravity of heavy stocks, boiling points estimated in this way may be considerably in error, sometimes as much as 50° F. for the heavier residues. Similar charts were developed[5] based on viscosities at other temperatures.

CHARACTERIZATION FROM VISCOSITY INDEX

Since viscosity index is generally interpreted as an indication of the character of a lubricating oil, a relationship should exist between it and the characterization factor. This general relationship is indicated by the upper curve of Figure 5.

Because of the effect of width of boiling range and other factors on viscosities at 100° F., the viscosity index is not a good method of characterization unless these factors are relatively constant. For example, a Mid-Continent lubricating oil may

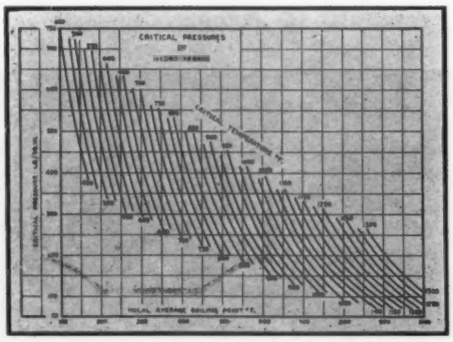


Fig. 7—Critical pressures of oils

have a characterization factor of 11.9 and a viscosity index of 65. By blending only 5 per cent of a light Mid-Continent naphtha, also having a characterization factor of 11.9, with this oil the viscosity index is increased to nearly 100. Thus, viscosity index is a good indication of character only when the width of boiling range is constant. However, for ordinary lubricating oils the boiling range is sufficiently narrow that this effect is negligible, and the curve of Figure 5 is a good approximation.

CHARACTERIZATION FROM ANILINE POINT

Aniline point has been extensively used as a method of characterization on the general theory that paraffinic materials have aniline points higher than those of unsaturates or aromatics. However, it has been found that boiling point, width of boiling range, and probably some other factors enter into the relationship between aniline point and other physical properties.

The lower curves of Figure 5 represent an approximate correlation between aniline point, characterization factor, and average boiling point. However, the relationship is rather rough and considerable deviation may result in either direction on some stocks.

HYDROGEN CONTENT

The curves of Figure 6 represent a relationship between hydrogen content and characterization factor for materials of constant boiling points.

Figure 6, combined with the preceding charts, permits estimation of hydrogen content from a knowledge of only the specific gravity and one other property. Ordinarily the error will be less than 0.5 per cent, based on the total weight of the oil, except in the cases of highly aromatic, low-boiling materials.

[5]Watson, Nelson and Murphy, Ind. Eng. Chem., 27, 146 (1935).

MOLECULAR WEIGHTS

The molecular weights of petroleum fractions may be satisfactorily estimated from average boil-

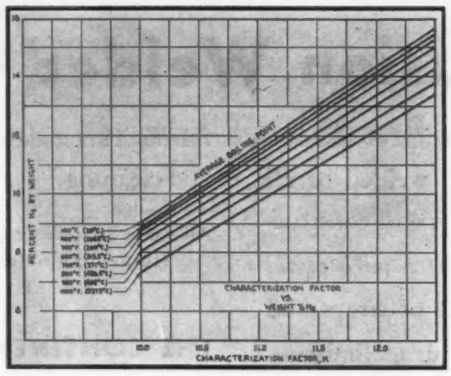


Fig. 6—Characterization factor vs. weight of hydrogen

ing point and gravity. Aromatic stocks of low characterization factors have lower molecular weights than paraffinic materials of the same average boiling points.

The relation between molecular weight, characterization factor, boiling point, and A.P.I. gravity is included in the curves of Figure 3. By interpolation between these curves, molecular weights may be estimated with errors rarely exceeding 5 per cent. If boiling point data are not available, the boiling point may be estimated from other properties using Figures 4 to 6.

CRITICAL PROPERTIES

The critical temperature curves of Figure 3 were calculated directly from a general equation based on data on pure compounds but are in satisfactory agreement with the existing data on petroleum.

Critical temperatures estimated from Figure 3 are applicable with little error to pure hydrocarbons, narrow petroleum cuts, or wide-boiling mixtures if a proper method of obtaining average boiling point is used.

The critical pressure of a pure compound is readily estimated by extrapolating its vapor pressure curve to the critical temperature and reading the corresponding pressure. The complete vapor pressure curve of any hydrocarbon may be estimated from its boiling point or a single determination of vapor pressure by use of the vapor pressure chart of Brown and Coats.[6]

The curves of Figure 7 were derived directly from the Brown-Coats vapor pressure chart, and relate the critical pressures of pure hydrocarbons to their boiling points and critical temperatures estimated from Figure 3. Aromatic compounds have higher critical temperatures and pressures than paraffinic materials of the same boiling points.

Measurements on both petroleum fractions and simple mixtures of pure compounds indicate that the critical pressures of mixtures are much higher than would be predicted by any method of averaging the critical pressures of the components. Frequently the critical pressure of the mixture is higher than that of any component present. This effect may be expressed as a relationship between width of boiling range and critical pressure.

The data on critical pressures of mixtures are few, and much additional work is necessary before a universally applicable and rigorous correlation is possible. The above method is in fair agreement with the available data and forms a convenient means of general approximation which seems to be as accurate as possible at present.

[6]Coats and Brown, "A Vapor Pressure Chart for Hydrocarbons." Dept. Engr. Research, University of Michigan, Circular Series No. 2 (Dec., 1928).

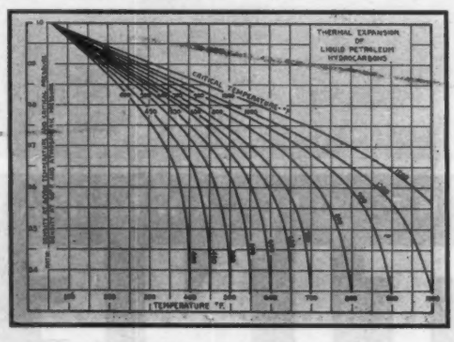


Fig. 8—Thermal expansion of oils

THERMAL EXPANSION AND COMPRESSIBILITY

EXPANSION

It has been found by Watson, Murphy and Nelson[7] that a satisfactory correlation of expansion data may be obtained on the basis of critical temperature. Data on both pure compounds and petroleum fractions indicate that, in general, hydrocarbons having the same critical temperature show almost identical expansion characteristics.

The curves of Figure 8 were plotted on this basis for estimating thermal expansion under the critical pressure.

Figure 8 permits satisfactory approximation of the thermal expansion of any type of stock, independent of characterization factor or gravity. The critical temperature is readily estimated from Figure 3.

It is believed that the relationships of Figure 8 are little affected by change in width of boiling range. Wide-boiling mixtures have higher critical

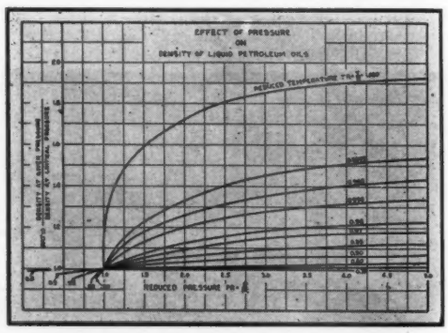


Fig. 9—Effect of pressure upon density of oils

pressures, but the deviations from the gas law in the critical region are less by a compensating amount.

COMPRESSIBILITY

The effect of moderate changes in pressure on the volumes of liquid oils are small at temperatures well below the critical. Referring to Figure 8, where the temperature is such that the density ratio is greater than 0.75, the effect of pressure may be neglected for many purposes. However, at higher temperatures or for extremely high pressures the values from Figure 8 must be corrected from Figure 9 if the pressure is different from the critical pressure.

The curves of Figure 9 express a general correlation of compressibility data which is satisfactory for ordinary purposes except in the region very close to the critical point where all density predictions become uncertain. There is evidence that this relationship is not greatly dependent upon width of boiling range.

SPECIFIC HEATS—LIQUID STATE

The subject of specific heats of liquid hydrocarbons and petroleum fractions was recently reviewed by Gaucher[8] with the conclusion that the relationship developed by Watson and Nelson[9] is the most generally satisfactory yet proposed for data existing at this time. This correlation expresses specific heat as a function of specific grav-

[7]Watson, Murphy and Nelson: "High Temperature Expansion and Compressibility of Petroleum Fractions," presented before the November, 1935, Midwest Regional Meeting of the American Chemical Society at Louisville.

[8]Gaucher, Ind. Eng. Chem., 27, 57 (1935).

[9]Watson and Nelson, Ind. Eng. Chem., 25, 880 (1933)

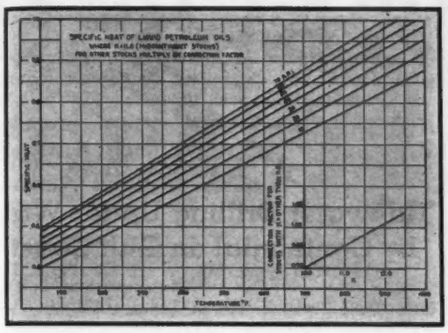


Fig. 10—Specific heat of Mid-Continent oils

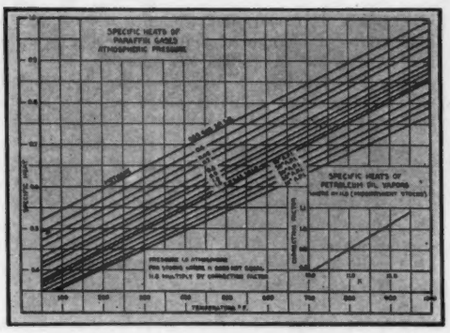


Fig. 11—Specific heats of oil vapors

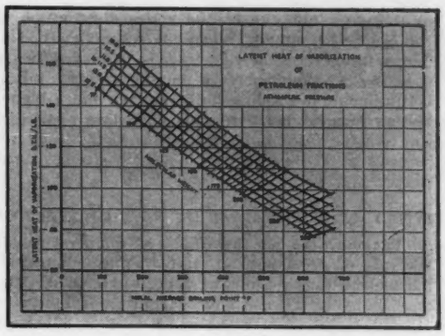


Fig. 12—Latent heats of vaporization

ity, temperature and characterization factor according to the following equation:

$$c_p = [0.6811 - 0.308s + t\,(0.000815 - 0.000306s)]$$

$$[0.055K + 0.35]$$

where

c_p = specific heat at t °F.
s = specific gravity at 60/60 °F.
t = temperature, °F.
K = U.O.P. characterization factor.

Figure 10 is a plot of the above equation for convenient use. The curves on the main plot apply directly to Mid-Continent stocks whose characterization factors are approximately 11.8. For other stocks the value read from the main plot is multiplied by a correction factor derived as a function of K from the small plot in the lower right-hand corner.

SPECIFIC HEATS—VAPOR STATE

The specific heats of petroleum vapors of Mid-Continent stocks have been thoroughly investigated by several laboratories with excellent agreement over wide temperature ranges. On the basis of these data and those available on pure compounds, the following general equation was proposed by Watson and Nelson:

$$c_p = \frac{4.0\text{-}s}{6{,}450}\,(t + 670)\,(0.12K - 0.41)$$

where

c_p = specific heat at t °F.
s = specific gravity at 60/60 °F.
t = temperature, °F.
K = U.O.P. characterization factor.

This equation is that proposed by Bahlke and Kay[10] for Mid-Continent stocks with an added correction for characterization factor. Its results are in fair agreement with the data of the investigators cited above and also with data on pure compounds.

In Figure 11, specific heats, calculated from the above equation for Mid-Continent type petroleum vapors, are represented by the lower curves of the main group, designated according to A.P.I. gravities. The upper curves of the main group, designated by gas specific gravities referred to air as 1.0, represent the data on the paraffin gases. These curves were estimated from the available measurements extrapolated to be consistent with the data on petroleum fractions. For petroleum vapors other than Mid-Continent types of 11.8 characterization factor, the values read from the chart are multiplied by a correction factor from the small curve in the lower right-hand corner.

LATENT HEAT OF VAPORIZATION

The experimental data published on the latent heats of vaporization of petroleum fractions is discouragingly contradictory. It is difficult to account for the wide variations reported, frequently amounting to greater than 50 per cent differences in similar stocks.

Because of the unsatisfactory state of the direct experimental data, it is considered preferable to adopt the best theoretical method for estimating latent heats. This is believed to be the equation of Kistyakowskii[11]. This equation accurately represents all data on non-polar pure compounds and is said to be thermodynamically sound.

The curves of Figure 12 were plotted directly from the Kistyakowskii equation, using the molecular weight relationships of Figure 3. Latent heats of vaporization are related to average boiling points, molecular weights and characterization factors.

EFFECT OF PRESSURE ON HEAT CONTENT
(Joule-Thomson Effect)

A simple means of correcting heat contents of gases and vapors for the effect of pressure was proposed by Watson and Nelson[12].

An improved revision of this chart is reproduced in Figure 13. The correction to be subtracted from heat content in changing from atmospheric to an elevated pressure is expressed as a function of reduced temperature, reduced pressure, molecular weight, and temperature. Since these corrections are relatively small, the results of the chart are satisfactory for most engineering purposes.

TOTAL HEAT CONTENTS

The total heat content of a petroleum fraction either liquid or vapor at any temperature or pressure in the range covered may be calculated from the above charts. The heat content at atmospheric pressure and the desired temperature is first calculated and this value corrected for the effect of pressure by means of Figure 13.

It may be assumed that the fraction is heated as a liquid to its average boiling point, vaporized at this temperature and superheated as a vapor to the final temperature. The errors of this assumption are ordinarily negligible. Where only partial vaporization exists, the heat contents of the liquid and vaporized portions are best treated separately.

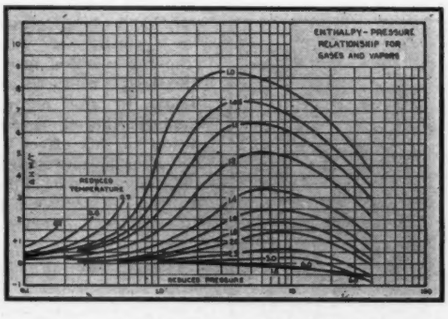


Fig. 13—Enthalpy-pressure relationship

For convenient use, it is preferable to prepare heat content charts applying to stocks and pressures of particular interest. Such charts are readily prepared from the above data.

HIGH TEMPERATURE VISCOSITIES

The viscosities of various pure hydrocarbons and petroleum fractions were recently studied at high temperatures and pressures by Watson, Wien and Murphy[13]. It was found that at temperatures about 200° F. the data are satisfactorily represented by the following equation:

$$\log\,(\log \mu/s + 1.7) = a \log\,(t + 100) + b$$

where

μ/s = kinematic viscosity in centistokes
t = temperature, °F.
a and b are constants characteristic of the oil.

On the basis of this equation a viscosity temperature chart was prepared with scales resulting in linear plots for viscosity data above 200° F.

The viscosity data were also combined with the data of Figure 3 to give the nomograph shown in Figure 14. This nomograph permits estimation of the viscosity of a petroleum fraction at any elevated temperature from only its characterization factor and the viscosity at one temperature. By use of the auxiliary rectangular chart superimposed on the nomograph the entire prediction of viscosity at elevated temperatures may be made from measurements of only average boiling point or characterization factor and gravity.

CRACKING REACTION VELOCITIES

In dealing with reactions of complex mixtures having wide boiling ranges, such as are common in cracking plant design, the definition of reaction velocity depends upon an arbitrarily chosen standard. It has been common practice to express the velocity of the cracking reaction in terms of the rate of gasoline formation per unit time. The variation of gasoline boiling range specifications and the frequent production of cracked distillates of higher than gasoline boiling range must be considered in this connection.

It has been found desirable also to define the reaction velocity as the rate of production of material outside the boiling range of the stock undergoing decomposition. The net cracking reaction is considered as producing material of boiling range lower than the initial boiling range of the charge and the net polymerization reaction as producing material of boiling point higher than the endpoint of the charge.

The principal difficulty experienced in using this definition is in establishing satisfactory initial and endpoints. Good results have been obtained by a consistent method of extrapolating Engler distillation curves to give apparent initial and final boiling points less susceptible to experimental error and the presence of small traces of high or low boiling materials than are the direct experimental values in any type distillation.

With the above definition of cracking it is evident that the reaction velocity varies with the width of boiling range for mixtures of the same average properties. In cracking a material of wide boiling range some of the decomposition products may still lie within the boiling range of the charge resulting in a lower reaction rate than would be shown by a narrow boiling range material of the same average characteristics.

In the utilization of reaction velocity data based on this definition, it has been necessary to develop methods of correlation between the boiling range

[10]Bahlke and Kay, Ind. Eng. Chem., 21, 942 (1929).

[11]Kistyakowskii, Z. Physik. Chem., 107, 65 (1923).

[12]Watson and Nelson, Ind. Eng. Chem., 25, 880 (1933).

[13]Watson, Wien and Murphy: "High Temperature Viscosities of Liquid Petroleum Fractions," presented before August, 1935, Meeting of American Chemical Society at San Francisco.

of the stock and the boiling range distribution of the cracked products. When the second method of determining reaction velocities is employed, when cracking a combined feed having a high initial boiling point to produce both gasoline and a higher boiling furnace distillate, it is important to predict the relative rates of formation of both distillates as well as the net rate of decomposition of the charge.

EFFECT OF TEMPERATURE ON RATE OF REACTION

Various data on the effect of temperature on the rate of decomposition of both pure compounds and petroleum fractions have been published. Rice and Johnston[14], Pease and Morton[15] and Paul and Marek[16] have recently published data on a variety of pure compounds. These data are correlated by means of the Arrhenius equations:

$$\log k = \frac{-E}{2.3\ R\ T} + I \qquad (1)$$

where,

k = Reaction velocity rate in fraction of remaining reactant decomposed per second
R = Gas constant, calories per gram mol per degree Kelvin
T = Absolute temperature, degrees Kelvin
E = Energy of activation in calories per gram mol
I = Constant.

From these data it was noted that the compounds which are most refractory as indicated by a low rate of decomposition at a given temperature had high temperature coefficients of reaction velocity as indicated by high values of the energy of activation E. This variation of energy of activation with refractoriness is fairly well expressed by the following equation:

$$E = K\ I \qquad (2)$$

The value of K, the constant in the above equation, varies from 4.3 to 4.9 x 10^3 when calculated from the data on pure compounds. Data on cracking of heavier petroleum fractions by Geniesse and Reuter[17] and others indicate that the constant should be somewhat lower, of the order of 4.2 x 10^3. Equations (1) and (2) may be used for estimation of the effect of temperature on reaction velocity if a value of reaction velocity at one temperature is available. For ordinary commercial cracking it is found that the rate of reaction is doubled by a change of approximately 21° F. at 800° F., by 26° F. at 900° F. and 950° F.

Similar conclusions were reached by Obriadchikoff[18] from an analysis based on the kinetic theory.

Few data are available on the effect of temperature on the rate of the polymerization reaction. However, there are indications that the velocity of this reaction is considerably less affected by temperature than are cracking reactions of similar materials. Some data indicate energies of activation of the order of 40,000 for polymerization.

EFFECT OF "DEPTH OF CRACKING" ON REACTION VELOCITY

It was noted by Geniesse and Reuter[17] that if the monomolecular reaction equation is applied to the cracking reaction, the velocity constants diminish rapidly as the percentage conversion is increased. In their experiments the reaction products were allowed to remain with the undecomposed charge throughout the reaction. Keith, Ward and Rubin[19], on the other hand, in similar investigations did not report this variation.

Experiments by Geniesse and Reuter[20] and Sydnor and Patterson[21] show that successively separated recycle stocks are increasingly refractory.

EFFECT OF CHARACTERIZATION FACTOR ON CRACKING RATE

It has long been recognized that aromatic stocks are more difficult to decompose than paraffinic materials of similar molecular weight and boiling point. These variations in rate of reaction with chemical composition may be quantitatively related to the U.O.P. characterization factor. It has been found that change of characterization factor from 10 to 12 increases the initial cracking reaction velocity as the characterization is increased.

For commercial design it is also desirable to consider the effect of characterization factor on the change in reaction rate with increased conversion. In many cases this may be even more important than the effect on the initial rate of reaction. It has been found that refractory stocks of low characterization factor show much greater change in reaction velocity with increased conversion than do paraffinic materials of high characterization factors.

EFFECT OF AVERAGE BOILING POINT ON RATE OF CRACKING

In considering the definition of cracking reaction rate it was pointed out that as here defined the velocity of the cracking reaction is reduced by increased width in the boiling range of the oil. In addition to this effect of width of boiling range, the average boiling point of the stock is also of considerable importance.

In general, it has been reported that if other factors are constant, the rate of cracking is greater for high boiling point materials than for low.

For satisfactory design of commercial cracking equipment it has been necessary to establish quantitative relationships between the rate of reaction and all of the variables described above. From such generalized correlations it is possible to predict fairly reasonably the size of equipment required in the reaction zone, the conditions at which the plant should operate, and the yields of the various products which will be produced in a proposed plant.

(To Be Continued.)

[14] J. Am. Ch. Soc., 56, 214 (1934).
[15] J. Am. Ch. Soc., 55, 3,191 (1933).
[16] Ind. Eng. Chem., 26, 454 (1934).
[17] Geniesse and Reuter, Ind. Eng. Chem., 22, 1,274 (1930); Ind. Eng. Chem., 24, 219 (1932).

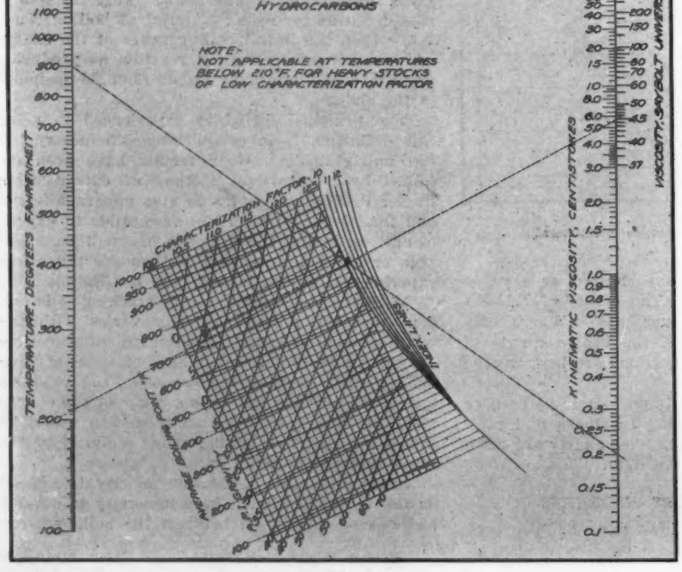

HIGH TEMPERATURE VISCOSITIES OF HYDROCARBONS
NOTE:- NOT APPLICABLE AT TEMPERATURES BELOW 210°F. FOR HEAVY STOCKS OF LOW CHARACTERIZATION FACTOR.
TEMPERATURE, DEGREES FAHRENHEIT
KINEMATIC VISCOSITY, CENTISTOKES
VISCOSITY, SAYBOLT UNIVERSAL SECONDS
CHARACTERIZATION FACTOR
MIDDLE BOILING POINT, °F.

Fig. 14—High temperature viscosity characteristics

[18] Neft. Khoz. No. 12, 1934. p. 35.
[19] Proc. A.P.I. 14M (III) May, 1933, p. 49.
[20] Ind. Eng. Chem., 22, 1,274 (1930); Ind. Eng. Chem., 24, 219 (1932).
[21] Ind. Eng. Chem., 22, 1,237 (1930).

Tidewater Drilling Under Way by Centennial on Gulf Coast

The first tidewater drilling operations in the lower Gulf Coast district of Texas are now under way by the Centennial Oil Co. of Fort Worth. The operators have begun drilling in the bed of Chiltipin Creek, where it traverses the Plymouth field,

Setting surface casing on the No. 2 Chiltipin Creek, San Patricio County, Texas. About 60 pilings, with a bearing of 14 tons each, are driven to support rig and derrick.

in San Patricio County. A survey of the creek bottom through this area revealed that it was below sea level, classing the stream as tidewater, and as such, under the jurisdiction of the state. The Centennial Oil Co. leases, which were acquired from the state, lie approximately 8 miles from the mouth of the creek at Copano Bay.

Before making location for a test the operators accurately survey the creek bed, and draft a cross section of the stream. The exact location is then made 5 feet out from the intersection of the bed and sea level. This point falls about 10 to 15 feet from the bank of the stream at its normal level.

A total of about 60 piles, each with a 14-ton bearing, are driven to support the rig and derrick. Thirty-three of these support the derrick proper, with an additional cluster of five at each corner, and eight piles are driven for the rotary. Derrick floors are raised to a point above the maximum flood stage of the stream, which places them on a level with the banks in many locations.

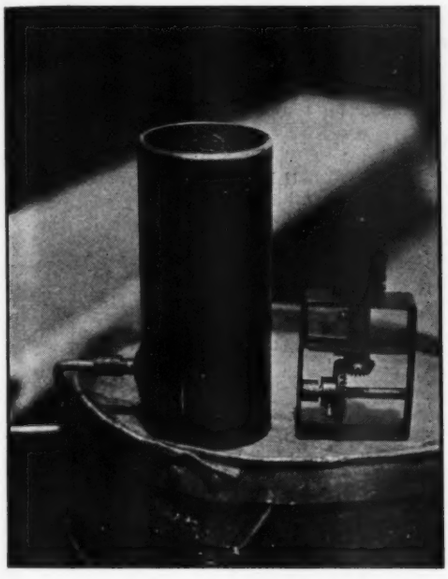
The setting of conductor pipe in these tests is an important step. On the first location, 64 feet of 20-inch was set by the Halliburton method. A good cement job at this point is essential for obvious reasons. Additional precautions will be taken in drilling, with directional surveys to be made at frequent intervals.

The engineers of this company are familiar with this type of drilling, having completed 64 wells in the Sabine River bed in East Texas, and drilled in the Trinity River in the Cayuga field. At the present time one test is drilling below surface casing in Tract 3, and piling substructure is being completed for a second test about a mile downstream, and adjacent to the bridge. A number of wells are planned by the company along the creek, which flows nearly 4 miles through proven acreage in the field.

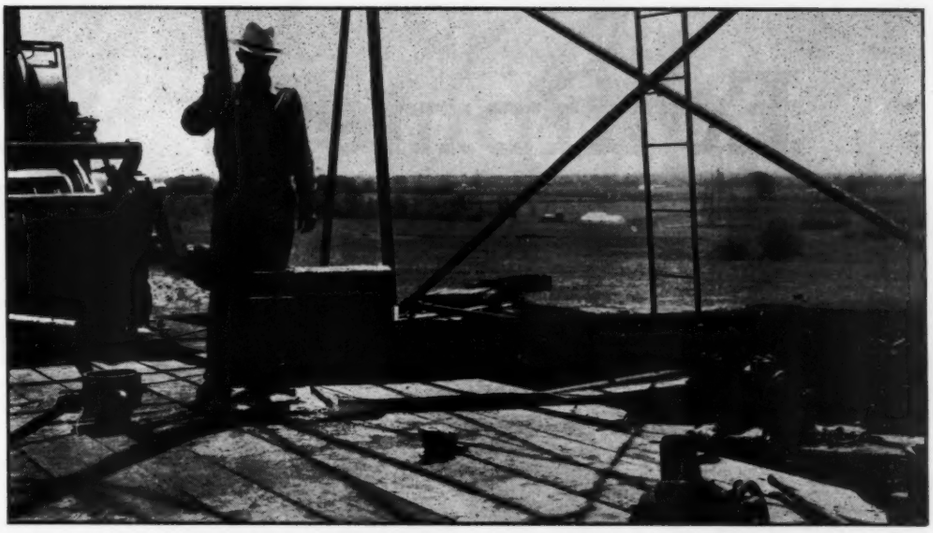
OPERATING IDEAS

Sucker Rod Thread Cleaner

Dirt on the threads of sucker rods has to be removed before the rods can be made up to run into the wells. It is usual practice to brush this dirt away with a wire brush but some ingenious lease man decided he could improve upon this method for cleaning the inside threads on the socket end. The accompanying picture shows this cleaner which is made up of two principal parts, the outer shell and the brush with its driving gears. The frame supporting the brush is placed inside the shell and the crank



shoved in until end engages the shaft gear. To operate, the socket end of the rod is lowered over the brush and the crank turned.

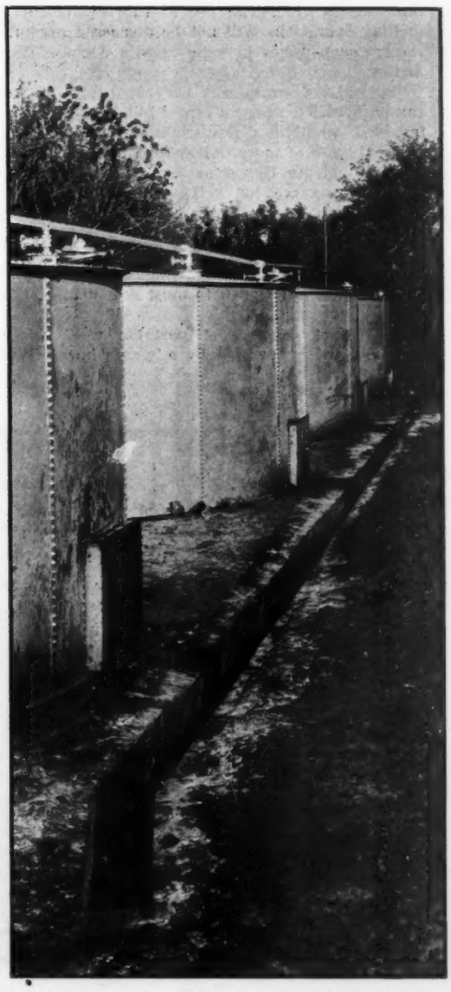


Trough of Special Design Used for Bailer Dump

To eliminate pollution of the soil and to save the oil as it is bailed from the hole, one company operating in Kansas has designed a steel trough in which the oil is dumped when operating the cleanout string. The oil after being dumped into the trough is allowed to stand for a while thus allowing any water to settle out before transferring the oil to the 100-bbl. tank into which the trough empties. The upper end of the trough is partially closed to prevent the oil from splashing over the derrick floor when the bailer is dumped and the trough is welded throughout so that it may be transported conveniently from lease to lease.

Concrete Salt Water Ditch

In order to prevent salt water from seeping into the ground around tank batteries one large company has equipped all of its tank batteries with concrete salt water drainage ditches. These connect to salt water lines through which the salt water flows by gravity to salt water disposal ponds. The salt water is drained from the stock tanks directly into the concrete ditch through the drains in the bottoms of the tanks. The appearance of the tank battery is improved, and payment for damages to cultivated land may be avoided through this installation.



Fire Station Constructed from Tank Sheeting

This oil company in Kansas needed a fire station and had on hand a large quantity of used side sheets from bolted steel tanks. Some genius conceived the idea of building the fire station out of the tank sheets with the results shown quite clearly in the accompanying picture.

Portable Well Servicing Equipment

By R. E. GIGNOUX and
Chief Engineer, Hopper Machine Works
WENDELL M. JONES
Manager Engineering Division, Petroleum Equipment Co.

Here the authors point out various applications of portable servicing equipment, the paper being read before the Calif. Division A.P.I. meeting, Los Angeles.

It has become more apparent with time that it is uneconomical to install, at each well, equipment suitable for both servicing the well and lifting the production. While the trend has been gradual, starting with shallow wells, the practice to eliminate the conventional standard end used in both servicing and lifting operations has spread to include the deepest wells. The standard end is being replaced by individual pumping machines designed for lifting oil only, and by portable equipment for well servicing. One portable hoist can be used for servicing several wells.

The economies are clearly demonstrated in a recent case of a company justifying the purchase of a $6,000 portable hoist, where only three more deep wells were to be drilled in an area where they had 100 wells, each equipped with combination pumping and pulling equipment. A saving of $2,000 per well by installing equipment for pumping only, paid for the servicing equipment.

The work to be done by portable well servicing equipment may be divided into two classifications: the first, well servicing which includes pulling and running rods and tubing; the second, bailing, and remedial work, which includes removing liners, placing plugs, running instruments and some drilling, as well as the operations under the well servicing classification. The use of this equipment for drilling operations will not be discussed herein although such use is in some cases a decisive factor in the choice of the hoist.

Specialized equipment for each type of work can be justified where a larger number of wells are involved, whereas a few wells in one locality demand the use of more universal equipment.

To illustrate this situation, it has been determined in a survey of well servicing operations in the Los Angeles Basin for one year, that approximately 80 per cent of the activities are confined to pulling rods.

This has led, in some instances, to the use of portable hoists designed to most economically handle rod jobs only.

The first or earliest portable well hoisting equipment was powered by a single horse. While the younger men in the industry are not familiar with this type, the old-timers all remember "Old Dobbin" who knew just how far to walk, when to stop, and when to back up. Next came automobiles converted into well pullers; then tractors with industrial hoists; and finally well pulling machines designed especially for the work to be done. The latter will be outlined below.

At present there are several manufacturers in the United States devoting the majority of their time and ability to the design and construction of this specialized equipment. Portable hoisting equipment also is an important item with some of our largest oil field equipment manufacturers. The capacities of well servicing units vary through a wide range, beginning with a rating of approximately 10 horsepower and with drum capacity for 500-foot wells, up to units powered with approximately 150-horsepower gasoline engines or 35/75-horsepower oil-well electric motors, equipped with drums to accommodate sufficient line for servicing 9,000-foot wells. The larger sizes are limited by portability factors involving weight and size.

The locations of portable pulling equipment vary as there is no standard working position for the hoist with relation to the well. The hoist is located normally adjacent to the derrick floor, however, locating the hoist at some distance from the derrick is still prevalent in some fields. The latter method involves operating the hoisting line through a snatch block or outside the derrick from the hoist to the crown sheave, whereas in the former the hoisting line is within the derrick.

Weight and size are the limiting factors in portable hoisting equipment, and if either of these become too great the economies of portable hoisting are absorbed by transportation costs.

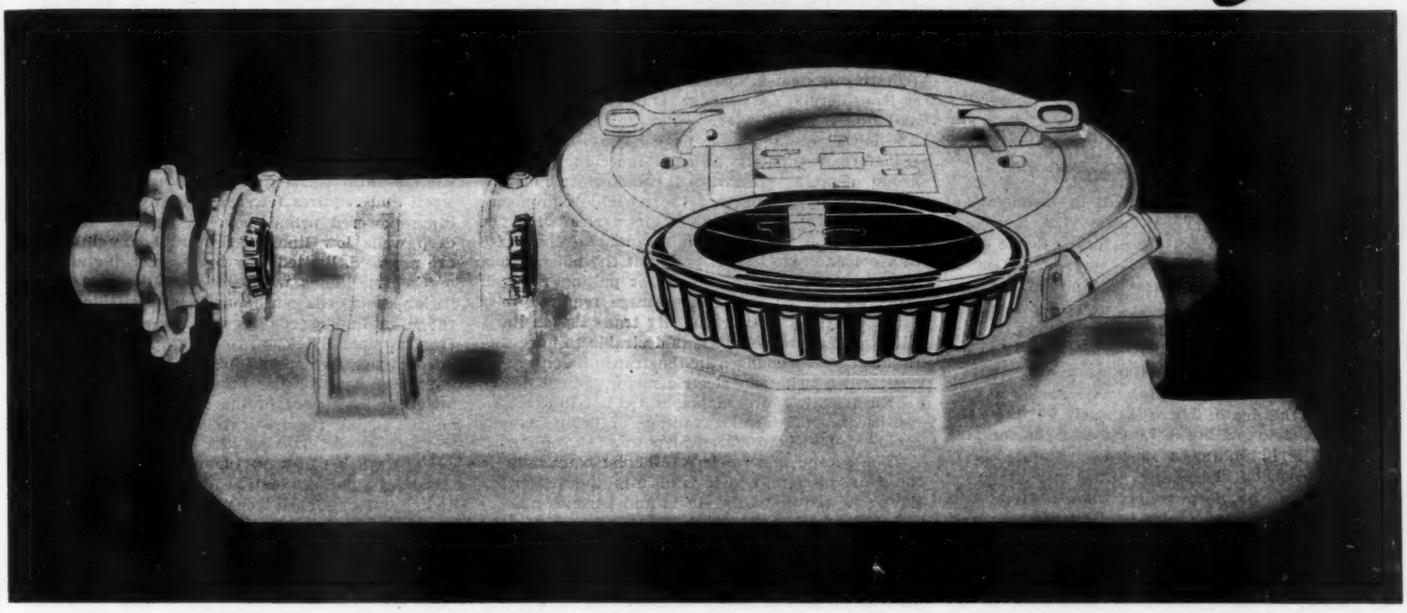
The mode of transportation governs the size and type of hoisting equipment, and should therefore be considered as part of a portable hoisting problem. The following tabulation outlines the suitability of the more common means of mountings and transportation.

CLASSIFICATION ACCORDING TO TRANSPORTATION

1. Hoists transported and powered by motive equipment.
   - A. Tractors.
     1. Wheel tractor.
        - (a) Moderate highway speed.
        - (b) Reliable in bad topographic conditions.
        - (c) Will service considerable area.
     2. Crawler tractor.
        - (a) Excellent for bad topographic conditions.
        - (b) Not suited for highway transportation.
        - (c) Adaptable to limited areas.
   - B. Trucks.
     - (a) Excellent highway speeds.
     - (b) Not suited for bad topographic conditions.
     - (c) Capable of servicing fields long distances apart.
     - (d) Must meet state highway regulations.
2. Hoists complete as unit, including prime mover.
   - A. Trailers.
     1. Wheel trailers.
        - (a) Fair highway speeds.
        - (b) Not suited for bad topographic conditions.
        - (c) Requires power equipment for moving.

Mud system of well in Calhoun County, Tex., showing central mixing pit in foreground, chemical and mud reserve tanks, and housing for mud pumps and suction pits

AN X-RAY VIEW OF A *Modern Rotary*



The application of Timken Bearings at the three points shown in this X-ray view is a modern refinement that yields happy results in power saving; wear reduction; radial-thrust resistance; increased dependability; longer equipment life; and lower maintenance costs.

Timken Bearings are ideally suited to the bearing requirements of all kinds of heavy duty oil field equipment because they combine unexcelled anti-friction efficiency with super load capacity plus the ability to hold moving parts in correct and constant alignment.

There is no substitute for the exclusive combination of Timken tapered construction, Timken positively aligned rolls and Timken Alloy Steel in modern drawworks, rotaries, drilling engines (gas and steam), pumping equipment of all types, swivels, compressors and other equipment. Specify Timken Bearings.

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TIMKEN TAPERED ROLLER BEARINGS

(d) Must meet state highway regulations.

2. Track laying trailers.
   (a) Excellent in bad topographic conditions.
   (b) Not suited for highway transportation.
   (c) Requires power equipment for moving.
   (d) Adaptable to limited areas.

B. Trucks.
   (a) Excellent highway speeds.
   (b) Not suited for bad topographic conditions.
   (c) Capable of servicing fields long distances apart.
   (d) Must meet state highway regulations.

C. Barges, swamp skids, etc.
   (a) Designed to suit conditions.

DESIGN OF EQUIPMENT

Portable hoisting equipment is made up of three major parts, prime mover, the means of transmitting power from prime mover to the drum and the hoisting drum. It is very important in considering equipment of this kind to make a complete study of the amount of power required, and the type of prime mover to be used.

While it is perhaps obvious, it is nevertheless interesting to realize that the work done in lifting a string of pipe from a well varies as the square of the depth. There is nearly 50 times the energy used in pulling a 7,000-foot string of pipe as there is in pulling a 1,000-foot string. Therefore, for economical hoisting speeds greater power is necessary for deep wells, whereas relatively small prime movers are practical for shallow well operations. The losses incurred when unnecessarily over-powering a hoist are additional; first cost, upkeep, fuel, and weight. Obviously the horsepower of hoisting equipment cannot be increased by installing additional speed changes, but these speed changes do permit the best utitilization of the available power. The power of the prime mover controls the pulling time and the speed changes should be arranged to approach a constant application of the power.

Two general types of prime movers are used in portable hoist work, namely the widely used multiple cylinder internal combustion engine, and the electric motor. Internal combustion engines, in general, have the desirable characteristic of being self-contained with all parts necessary to produce the power within the unit. They have the distinct disadvantage of having low torque when operated at low speed and no torque at zero speed. This fundamental characteristic necessitates a suitable clutch arrangement between the drum and the engine to permit lifting the load only when the engine is running fast enough to develop sufficient torque for the load. In order to develop the required torque high speed engines must be accelerated from idling speeds more than slow speed engines. Operating speeds of these two classes of engines vary from 3,000 r.p.m. to 500 r.p.m. The slower speed engines in general are heavier and more costly than the higher speed engines, but a discussion of their relative merits is not within the scope of this paper. Internal combustion engines in use are of the diesel type and those using gasoline, natural gas or butane for fuel.

The electric motor has the advantage of having a high torque at low speed, and its torque remains nearly constant throughout a greater part of its speed range. This characteristic is ideal for hoisting work. Two types of electric motors are used as prime movers—low voltage type and high voltage type.

The low voltage motors used with hoist equipment are the variable speed high torque type, and the constant speed medium torque or common industrial motor. The higher voltage motors are used in localities where the general power distributing system is operated at 2,300 volts. There is considerable saving in transformer capacity and line capacity when using the higher voltage. The lower voltage motors must have either a large transformer capacity at each individual well or group of wells, otherwise a transformer must be transported as a part of the portable equipment. Since the torque of the motor varies with the square of the voltage, a slight voltage drop results in a considerable loss of power at the hoist. When high torque motors are used for pulling work in order to provide for the amperage required it is necessary to have high capacity transmission lines. Although not necessary, it is desirable to have mechanical speed changes in the transmission equipment when using an electric motor.

Electrically powered hoists are not in common use because of the disadvantage of being inapplicable except where electrical power is available.

The second general part of hoist equipment is the transmission, which transmits the power of the prime mover to the drum and permits numerous variations in the drum speeds with respect to that of the prime mover. This mechanism is made up of various combinations of V-belts, chain and gears. V-belts are applicable in the reduction of high prime mover speeds to reduce the power application within the speed range of hoisting requirements. Chain and gears may likewise be used in reducing prime mover speeds, but are more generally used elsewhere in the transmission.

Chain has the disadvantage of lacking the compactness that is inherent in a geared transmission, however, from a cost viewpoint it is apparent that the gear and chain transmission have equal merit.

RELATIONSHIP BETWEEN POWER AND HOISTING SPEEDS

Using all available power a curve plotted with pulling speeds versus the amount of tubing left in the well, gives an equilateral hyperbola. When the actual speeds are plotted on this curve, it is found that the values deviate from the theoretical curve as the load lightens until such time as the transmission ratio is changed. These deviations, if small enough, form a sequence of triangles, one for each transmission ratio. The area of the triangles represents the time lost or power lost from a constant power application.

A theoretically ideal transmission with infinite ratios would select a line speed, governed by the torque, so that the prime mover would exert its maximum power at all times. Speed variations approaching the optimum could be selected for one particular condition, but since conditions vary as to depth of well and size of tubing, a compromise in speed ratios is used to fulfill the requirements of pulling, bailing and other operations necessary in servicing oil wells.

The time saved with too many speed variations would not show economy when compared with the losses imposed by additional weight, excessive wearing parts, and friction in the transmission. The extreme variation between low and high hoisting speeds is governed by the working load on the line with respect to the low speed, and by a high speed that will permit lifting reasonable loads.

Low powered prime movers are usually used for comparatively shallow wells where only relatively low line pulls are necessary. High line speeds are not usable where prime movers of small power are used. Thus with low powered hoists the variation in ratio between the high and low speed is small and requires few speed changes. Where medium powered prime movers are used to service deep wells low line speeds and heavy line pulls are required, limited only by the working strength of the line. Thus with moderate power available faster line speeds can be used and the wider usable range in line speeds requires more steps in the transmission. High powered prime movers can have higher line speeds in low gear as this speed is limited by working line loads. The high limitation in line speed in this case is not dependent on the lifting requirement but is limited to safe working speeds. This smaller speed range requires a fewer number of speed changes. The above power classifications are relative to the work to be done and what might be considered high horsepower for servicing a 5,000-foot well, would be only medium or low power for servicing an 8,000-foot well.

The third and last major part of the hoist is the drum. Both single drum and double drum hoists are used universally. The single drum hoist has the advantage of lower first cost and less weight. The double drum hoist is desirable for some classes of work, and the economic selection of single or double drum hoists depend entirely upon the work for which it is to be used. In fields where bailing is seldom done, a single drum hoist is most suited. In fields where bailing is necessary nearly every time that the tubing is pulled, double drum hoists are easily justified. A large single drum hoist can also be used in this type of work, using one part of the drum for sand reel storage, and the remaining part of the drum for pulling. This operation necessitates the removal of the pulling line from the drum before bailing can be started.

The brake rims are an important part of the drum and on the present day hoist differ from those used on rotary drums in that they are usually lighter. Water is seldom used for cooling rims in production work, but since the lighter rims give better heat dissipation the lighter rims may be used without water cooling provisions. The thermal capacity of hoist brakes is somewhat limited although the actual holding capacity is not sacrificed.

There is a very distinct ratio between flange diameter, core diameter, and distance between flanges for a particular operation. The manufacturers of portable hoisting equipment have been faced with the difficult problem of making a standard drum that will suit all conditions. Should a hoist be used to do one piece of work and that only, an ideal drum width, flange diameter, and core diameter could be designed to aid in approximating the theoretical power application.

Free spinning drums are extremely important in production hoists as any lost time in lowering light empty blocks is just as important as time lost in hoisting loaded blocks.

If the maximum economies are to be realized in portable well servicing equipment, care must be exercised to select the proper machine to do the particular range of work. Mobility in all conditions to be encountered determines the type of transportation. The three major hoist parts should be combined into a balanced unit, which makes usable the economical capacity of the prime mover, the transmission equipment and the drum.

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PROBLEMS FROM READERS

Edited by T. F. Smiley

Names Good Examples of Right and Wrong Ways to Develop Fields

I got into an argument here with several other men about the right and wrong ways of developing oil fields. I argued that the Conroe field was a good example of what can be done by going at it right and that East Texas was a good example of going at it wrong. Nobody denied East Texas had just about upset the oil industry, but when they asked me how much better Conroe was I found I couldn't tell much except in a general way. Please give me some facts about the way the Conroe field has been developed and the good results from it.—E. T. N.

In naming the Conroe and East Texas fields you cited excellent examples of the right and wrong ways of developing oil fields. Since you and your friends evidently are familiar with the demoralization which resulted from the ungoverned race for oil in East Texas, there is no need of saying anything about that. There is much that might be said about the orderly development of the Conroe field in Montgomery County, Texas, which affords a striking contrast.

No high gas-oil ratio or poorly completed wells or wells that make more than 12 per cent water have been allowed to produce in the Conroe field. When such conditions are found measures are taken at once to correct them. The field has a definitely defined gas cap or free gas area with the gas-oil contact established at a level of 4,850 feet (subsea depth). The gas-oil contact level became established early in the development, and in most instances in the main producing horizon operators have been able to set their casing below this point so there has been little trouble from this score. The average gas-oil ratio is 700 feet per barrel, including the Upper Cockfield sand wells, which make considerable gas. The Upper Cockfield carries gas over a large part of the main field and the oil is limited to a comparatively small strip around the edges. As the sand is comparatively thin it is difficult for operators to shut off the gas in wells in that horizon. In the Conroe or main sand it has been found when a well is cased below minus 4,800 feet and tubing is set low, generally within one joint of bottom, the rate of flow of the well has little effect on the gas-oil ratio, which is maintained comparatively low. Wells in this sand generally can be corrected easily to remedy any high gas-oil ratio situation.

Accurate records of reservoir pressures have been kept. Pressures of all wells were recorded at first, but as the number of wells continued to grow, the plan of taking pressures of key wells strategically located was adopted. Pressures of about 85 key wells are taken every two months. The plan followed takes into consideration a computation of the weighted average pressure of the entire field.

To insure accurate pressure reports, operators are careful in every detail of the procedure. Participating companies cooperating in starting and ending pressure checks at the same time. Key wells are shut in for 24 hours before taking the pressure in order that the pressures of the respective wells may be equalized and be as nearly static as possible. Five pressure instruments are used. All are run into a common well first for calibration of the instruments. Following completion of the pressure-taking all are rerun into the same original well to recheck their calibration. In actual taking of pressures, the instruments are left in the wells 10 minutes to allow for adjustments in temperature. Pressures are taken as close to the bottom of the tubing as it is safe to run the instruments. Fluid weights are taken at various levels in the hole. All these readings are taken into consideration in figuring the actual pressure at the bottom of the hole. This pressure figure is calculated back to a subsea datum of 4,800 feet as a correction factor.

Thinks Sand-Thickness Map Is More Trustworthy Than Structural Map

The subjoined communication from a well-known operator will be read with interest by many. This department will be glad to receive other expressions on the same subject.

"I have made and studied hundreds of columnar sections of well logs. A striking feature is local convergence or divergence between identical horizons and its effect. Thus, a subsurface structural map based on a persistent upper lime, for instance, might give an utterly misleading interpretation of the true structure of the deeper oil sand so far as it relates to sea-level data. This would certainly make some of the average local structural maps worse than useless. For that reason, in most cases, a correct local structural map cannot be made in advance of a high percentage of well completions and is often worthless unless based on the producing horizon.

"However, a regional structural map which is based on surface formations or widely separated subsurface control may have a degree of value in test drilling.

"In gently warped territory it seems to me a sand-thickness map, which can be made only after a high percentage of well completions, is of more value than a structural map. In general, isn't the interpretation of some of the oil maps so freely exhibited in the street and in building lobbies likely to be misleading (unintentionally) and to result in blasted hopes?"—T. M. G.

WHY THEY CALLED IT *Oil Scout*

The oil scout was so named because at the outset his work was much like that of a military scout. Advance information concerning new wells was extremely important to oil speculators, for a gusher could wreck the market and a dry hole could send prices soaring. So speculators who could afford to do it employed lookouts to watch new operations and report daily by wire. The dozen or so of these watchers in service in 1880 gathered at the "Dewdrop," a mystery well on Kinzua Creek, in Pennsylvania, which it was feared might prove a big one and start oil prices tumbling. The scouts (they were not called that yet) outwitted armed guards and obtained facts upon which they based reports to their chiefs the well probably would be a small producer.

Relation of Depth to Variations in Rock Pressure and Temperature

Tell me, please, how the rock pressure and temperature of wells at different depths are figured. Is there a regular formula for doing it? Statements I have come across seem to indicate that the typical rock covering of an oil sand is a clay or shale, rather than one of the harder rocks. It would seem as though the clay formations would not be able to resist strong gas pressures as well as the hard rocks. What is the explanation? How would you define rock pressure?—K. E. W.

Under ordinary conditions rock pressure, or the natural pressure in a formation below the earth's surface, is regarded as equivalent to the hydrostatic pressure for that depth, but actually there are wide variations, for which there seems to be no satisfactory explanation. In his book on "Increasing the Recovery of Petroleum," Wentworth H. Osgood points out that a column of fresh water 100 feet high exerts a pressure of 43.4 pounds per square inch. He goes on to say that this is the basic reference unit, since pressures for other depths are determined by multiplying the number 43.4 by the depth (or rather the height) of the water column in hundreds of feet. For fluids of greater density, such as salt water, mud fluid, etc., or fluids of lower density, such as oil, the pressure of the fluid column is found by multiplying the fresh-water pressure for that height by the specific gravity of the fluid under consideration. No density variations are considered in practical work with liquids.

In considering pressures resulting from gas or air columns, the reference unit is the atmospheric pressure of air, or 14.69 pounds per square inch at sea level. This pressure decreases about a half-pound for every 1,000 feet increase in elevation. The same relation exists for the increase of air pressure or gas pressure with depth due to the column thereof in a well, except that dry gas as an average has a specific gravity of .6 referred to air. It must be remembered that the atmospheric pressure may vary a pound or more from day to day for any given place.

Concerning temperature variations, C. E. Van Orstrand, in "Interpreting Earth Temperatures," says that beneath the general level of the earth's surface in temperate regions a rather uniform temperature of about 50 to 60° F. exists at the depth of 50 or 60 feet and that it increases about 1 degree for each additional 50 to 70 feet. All figures are subject, however, to deviations owing to various local conditions.

With reference to the character of the formations covering oil deposits, it may be said that almost all such overspreading strata are argillaceous, or clayey, rocks. The thickness of the covering required to retain a petroleum deposit depends upon the gas pressure that exists in the deposit. If the covering is a soft, pliable rock that will not fracture, it is more effective than a hard, brittle or jointed rock. Most of the large petroleum deposits developed are relatively deep. They are held down by adequate coverings of clays or shales, which are fractured with difficulty and which close any fractures that happen to be made in them. Some oil fields, however, are developed very close to the surface, where the caprock seals are not of such a positive nature.

One authority summarizes rock pressure as follows: The reservoir pressure called rock pressure is the resultant of pressures applied on the reservoir rock and the fluid pressure. The pressures applied on the formational rock member may be the weight of the overlying strata, its tendency to compact, pressure induced by folding, etc.

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QUESTIONS ON TECHNOLOGY

By Charles K. Francis, Ph.D., Technical Editor

Carbon Black Used by Printing and Rubber Industries

Which uses the largest quantity of carbon black, the printing ink industry or the rubber industry? What is the selling price of carbon black at the plants?—G.A.S.

Carbon black, first made from natural gas in 1872, was originally used for the manufacturing of printing ink and paints, but now the largest consumer is the rubber industry, which consumed 182,000,000 pounds of the total 350,000,000 pounds made in 1935. The treads of automobile tires contain about 50 per cent of the rubber content, varying from 3.3 to 11.9 pounds per tire, depending on the size, design and number of plies. Carbon black was originally added to rubber simply as a coloring medium; its remarkable strengthening and wearing properties were discovered later. Printers' ink required 17,000,000 pounds last year. One pound of this ink is sufficient to print approximately 4,000 newspaper pages.

The ordinary grade of carbon black has been selling from 4 to 8 cents a pound, but the finest jet blacks bring $1.10 a pound.

Reference: I. Doogin, Chem. Met., 43, 139, 1936.

Over-Sulfuring of Gasoline and Sulfur-Removing Processes

It is well known that very frequently gasoline and kerosene are increased in sulfur content in the sweetening process due to oversulfuring by the addition of sulfur. Is there any process whereby this excess sulfur can be removed?—M. L. A.

The usual practice is to so control the addition of sulfur in light oil treating that there will be no excess sulfur, but should a charge be oversulfured it may be re-run with the addition of some sour distillate containing mercaptans, or a concentrated solution of mercaptans and then sweetening with plumbite solution.

The usual specification for total sulfur in both gasoline and kerosene is 0.10 per cent. Under normal conditions sulfur will dissolve in these products to the extent of approximately 0.40 per cent, but some heavy gasolines and kerosene may possibly dissolve as much as 1.5 per cent with slight elevation of temperature. These small quantities and the difficulties experienced in the refinery control have stimulated the search for other methods to replace the conventional doctor process. Some of these may be very briefly outlined.

The fact that sulfur readily combines with many metals is the basis for several proposed methods for removing sulfur from petroleum distillates. Agitation with mercury, finely divided zinc, aluminum, sodium, iron, copper and lead are mentioned. Aluminum is activated by mercuric chloride solution in alcohol and the distillate either sprayed with, or passed through the solution. Contact with mercury is too expensive. Finely divided zinc, copper and other metals deposited on some adsorbing material, packed in towers through which the liquid or vapor is passed, are mentioned.

Treatment with metallic salt solutions, such as mercuric chloride in water or alcohol, ferric chloride in hydrochloric acid solution and arsenic solutions have been studied. The oxides of the metals have also been proposed. Among these are ferric oxide for vapor phase treatment. Magnesite and bauxite act to decompose sulfur compounds to form hydrogen sulfide, which is removed by ferric oxide. The well-known Frasch copper oxide is suggested for oils especially high in sulfur.

Calcium carbide is an interesting desulfurizing agent. The reaction is explained by:

$$C_2H_5SH + CaC_2 = C_2H_2 + C_2H_4 + CaS$$

The calcium sulfide is easily washed away and the acetylene passes off.

A recent advancement is hydrogenation. The introduction of hydrogen into the oil stock in the presence of a catalyst at high temperatures is accompanied with the removal of sulfur in the form of hydrogen sulfide.

All of these methods, making use of the reagents that have been mentioned, have been patented. Some further details of the processes, together with many patent references, may be found in Chemical Refining of Petroleum by Kalichevsky and Stagner.

Questions on Petroleum Technology may be sent to Dr. Charles K. Francis, The Oil and Gas Journal, Tulsa, Okla. When a copy of the answer is desired postage should be enclosed.

SPECIFICATIONS

CUT-BACK ASPHALT FOR ROADS

(Part 1)

There are nine grades of cut-back asphalts, prepared by fluxing asphalt with distillate. Shall be homogeneous and free from water. The grades, with viscosities are—

MC-1, 40-150 at 77° F. All following viscosities are at 140° F.: MC-2, 150-250; MC-3, 300-500; MC-4, 500-800; MC-5, 170-280. These are medium curing asphalt cut-back.

RC-1, 80-160 and RC-2, 200-400 at 122° F. RC-3, 275-400 and RC-4, 700-1400, at 140° F. These are rapid curing asphalt cut-back.

The properties shall be in accordance with those shown in Tables 1a and 1b.

TABLE 1a—PHYSICAL AND CHEMICAL PROPERTIES

Grade MC	Viscosity furol	Distillate Volume per cent off at 437°F.	600°F.	680°F.
1	50/150 @ 77° F.	x/10	25/x	x/50
2	150/250 @ 140° F.	x/2	10/20	2/27
3	300/500 @ 140° F.	x/2	8/20	x/25
4	500/800 @ 140° F.	x/1	x/16	x/25
5	170/280 @ 180° F.	x/1	x/14	x/20

Note: Limitations are shown as min. and max. The symbol 25/x means 25 min. and no max. stipulated.

The flash point shall be 150° F. minimum, for all grades; ductility of residue at 77° F., cms., 60/x; solubility of residue in carbon disulfide per cent 99.5/x. The penetration of the residue 100 g., 5 sec., at 77° F. shall be 70/300 for MC-1 and 100/300 for the other grades.

(Part 2 will follow.)

Solubility of Natural Gas or Hydrocarbons in Water

Is there information available showing absorption of natural gas by water when natural gas is used as the medium to blow a fresh water well? We are vitally interested in knowing if any meter tests have been made on installations of this nature, showing actual per cent of gas lost through absorption by the water. —O. B. B.

The quantity of natural gas soluble in water is so small that it would not be practical to measure the solubility by the ordinary metering instruments. The solubility of the hydrocarbons in water is usually considered to be hardly more than a trace. However, to be exact in a scientific sense, the lighter hydrocarbons have an appreciable solubility. Methane is soluble to the extent of 9 per cent at 60° F. (9 cc. in 100 cc. water). Propane is soluble to the extent of 6½ per cent at approximately 60° F.; pentane only 0.036 per cent. These are sufficient to indicate the general tendency, that is, the higher the molecular weight of the hydrocarbon, the lower the solubility.

If the composition of the gas is known, it is possible to calculate the solubility at the temperature given, 60° F. These are maximum percentages obtained under the best conditions and long contact. The mere passage of natural gas through water under the conditions existing on the lease would not permit solubilities to the extent mentioned.

Gurwitsch states: "Water is not entirely insoluble in petroleum oils, though its solubility is very slight. This problem may be of great practical significance in some special cases, as for transformer oils; as the merest traces of moisture are sufficient to lower very considerably the dielectric strength of these oils to resist electric discharges. This solubility increases with increase of temperature so that an oil which while hot is quite transparent and clear may become cloudy on cooling owing to the separation of water."

While the several petroleum liquids are considered to be insoluble in water they are soluble enough to impart a taste and odor to water.

Reference: Gurwitsch-Moore, Petroleum Technology, page 263.

Refineries of the World

Could you give us the following indicated information covering the oil refineries of the world? Total number of refineries; daily capacity (1) for crude, (2) for cracking; number of refineries having cracking stills.—T. F. C.

A complete list of the refineries of the world, with details showing types of plants, was printed in The Oil and Gas Journal, January 16, 1936, page 22.

There were 805 petroleum refineries, located in 43 countries, in January of this year. The total daily crude oil capacity of these was 6,132,695 bbls.; 3,815,470 of which represented the refineries of the United States. There were 311 refineries that had cracking units with a reported cracking capacity of 2,652,921 bbls. daily. There were 503 refineries in operation in the United States in January of 1936; of these 210 had cracking units.

With the general increase in motor fuel consumption in foreign countries, the operators have turned to cracking units in order to add to their gasoline output without having to run more crude oil. All cracking capacities are approximations.

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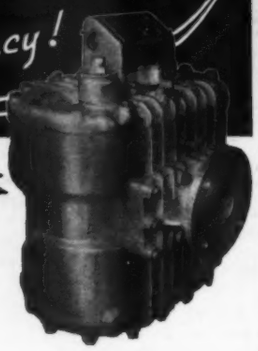

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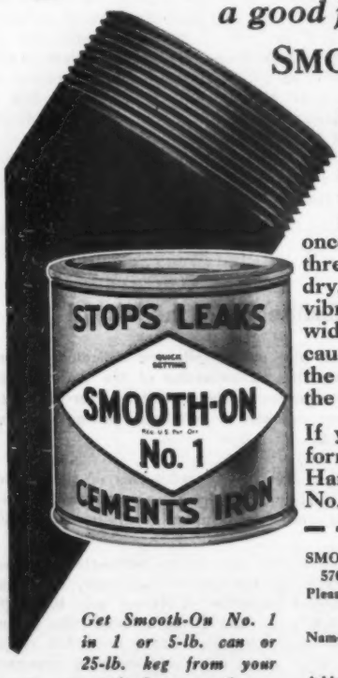

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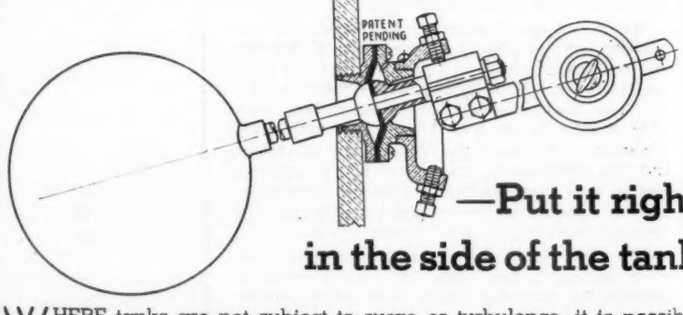

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FIELD OPERATIONS

Summarizing the Week's Developments

A total of 370 oil wells, 51 gas wells and 116 dry holes, or 537 completions were registered in the United States in the past week, an increase of 26 in the grand total. The completions for the year up to the close of June 27 numbered 11,302 as against 10,262 in the same period last year.

KANSAS

Shell Petroleum Corporation No. 1 Whipple, the sixth producer in the prolific Lerado pool of southwestern Reno County, Kansas, flowed 1,333 barrels of oil in three hours. Production is from Viola lime at 4,147 feet. Two wildcat pool openers were completed in Ellis County. Jones Brothers and others No. 1 Solomon, in section 28-11-19w, flowed 600 barrels naturally in 24 hours, and Bridgeport Machine Company No. 1 Madden, section 26-15-18w, pumped 240 barrels of oil in 20 hours.

OKLAHOMA

Twenty-one producers in the Capitol area of the Oklahoma City field were completed, and more than 30 wells were in or near the pay and due for completion the current week. Two of the new producers were on state-owned land, one immediately east and one immediately west of the capitol.

The Capitol area has 78 completed oil wells with a potential rated at 1,022,779 barrels and they produced in seven days last week an average of 33,324 barrels per day. Nine new producers were completed in the Fitts field, Pontotoc County, and two in the nearby Jesse pool.

CALIFORNIA

Humboldt, far northwesterly county in California, hundreds of miles from any oil region, may develop an oil or gas field, as a test in the Eureka district blew out while drilling, producing an undetermined volume of gas until shut in.

GULF COAST FIELDS

The old Jennings field in Acadia Parish, Louisiana, was extended 1,800 feet and a new producing horizon was found in the St. Martinsville field in St. Martin Parish, Louisiana.

NEW MEXICO

Lea County, New Mexico, produced an average of 69,940 barrels per day in the past week which is perhaps the largest production ever recorded in that area. The Eunice pool produced 20,860 barrels per day and Hobbs 23,550 barrels, while various other pools in the county made up the remainder.

SOUTHWEST TEXAS

The Southwest Texas division, which is the most active in the state, and which has completed the largest number of oil wells this year, outside of East Texas developed new production areas in Bee and Duval Counties.

LOUISIANA-ARKANSAS

The Rodessa field in Louisiana and Texas was in a slump and recorded few completions and little new work. A disturbing factor entered into the much talked of Permian lime area in the Smackover field in Arkansas, when the discovery well developed some water with its gas and distillate production.

Stocks of Crude Petroleum

(United States Bureau of Mines)

GRADE OF CRUDE OIL—	June 13 1936	June 6 1936	June 15 1935
Pennsylvania Grade	4,297,000	4,320,000	4,824,000
Other Appalachian	917,000	928,000	977,000
Lima-N. E. Indiana-Michigan	1,323,000	1,307,000	1,242,000
Illinois-S. W. Indiana	10,314,000	10,262,000	11,559,000
N. Louisiana-Arkansas	10,609,000	10,434,000	10,402,000
West Texas-S. E. New Mexico	28,896,000	28,891,000	31,640,000
East Texas	21,164,000	21,739,000	29,594,000
Other Mid-Continent	125,913,000	126,493,000	147,090,000
Gulf Coast	28,720,000	28,806,000	23,428,000
Rocky Mountain	26,423,000	26,571,000	27,411,000
California	34,518,000	34,943,000	30,136,000
Foreign	2,549,000	2,709,000	3,501,000
Total reported	295,643,000	297,403,000	321,804,000
Estimate of unreported stocks	16,900,000	16,900,000	14,200,000
Total stocks in U. S.	312,543,000	314,353,000	336,004,000

Outstanding Fields—Highlights

(Week ending June 27)

TEXAS

FIELD—	Rigs up	Wells drlg.	Weekly oil completions	Initial prod.	Total No. oil wells	Daily av. prod.
Anahuac	1	9	1	528	87	8,334
Hastings	2	4	4	2,124	81	7,657
Loma Novia	6	8	15	4,130	508	15,470
Seven Sisters	3	14	6	2,230	220	6,380
Saxet Heights	3	16	7	1,880	112	5,510
Saxet	3	32	4	1,290	140	12,115
East Texas	85	185	48	*1,615	20,859	445,097
Talco	9	25	2	368	12	1,620
OKLAHOMA						
Oklahoma City	9	72	21	49,807	1,048	137,775
Fitts	8	62	9	11,871	384	48,625
Burbank-S. Burbank	5	13	1	459	2,144	21,425
KANSAS						
Ellis County	5	31	3	2,206	28	1,233
Reno County	3	24	3	1,526	284	13,486
Russell County	8	48	9	7,406	433	16,753
Rice County	3	38	9	9,789	484	30,710
NEW MEXICO						
Lea County	16	85	11	10,480	845	69,940
LOUISIANA-TEXAS						
Rodessa, La.	3	44	3	1,440	209	55,735
Rodessa, Tex.	0	12	0	0	18	4,825
Gillis, La.	2	5	1	525	43	15,998
Tepetate, La.	2	2	0	0	19	3,532
MICHIGAN						
Porter-Yost	6	14	2	240	385	16,036
Crystal-Montcalm	3	13	2	380	134	6,518

*Short-time initial production.

Completions in All Fields

(Week ending June 27)

	Oil	Gas	Dry	Tl.	1936 Total comp. to date	1935 Total comp. to date
Penna. Grade Fields	41	13	6	60	1,404	1,364
Lima Field	0	3	2	5	31	48
Central Ohio	2	7	2	11	139	219
Indiana	0	1	1	2	77	98
Illinois	0	0	0	0	11	9
Michigan	6	11	6	23	265	185
Kentucky	0	0	0	0	99	113
Kansas	29	1	12	42	758	570
Oklahoma	60	1	14	75	1,184	903
North Cent. Texas	24	0	23	47	1,334	1,265
West Texas	30	0	4	34	668	371
Texas Panhandle	7	3	1	11	334	317
East Central Texas	4	0	2	6	135	117
East Texas	48	0	2	50	1,355	2,463
East Texas border	0	0	0	0	22	5
Gulf Coast Texas	27	7	0	34	546	453
Southwest Texas	54	3	24	81	1,396	645
Total Texas	194	13	56	263	5,790	5,636
North Louisiana	4	0	2	6	309	138
Gulf Coast Louisiana	7	1	0	8	190	192
Total Louisiana	11	1	2	14	499	330
Arkansas	0	0	0	0	42	62
Montana	3	0	3	6	93	26
Wyoming	0	0	0	0	40	26
Colorado	0	0	0	0	14	8
New Mexico	11	0	2	13	270	138
Utah	0	0	0	0	4	4
California	13	0	10	23	582	523
Total U. S.	370	51	116	537	11,302	10,262
Total previous wk.	363	46	102	511	.....	.....
Difference	7	5	14	26	.....	.....

Eastern Field Report

GASSER IN RITCHIE COUNTY GOOD FOR SIX MILLION FEET

By STAFF CORRESPONDENT

PITTSBURGH, Pa., June 29.—The revived activity in the lower eastern fields is expanding rapidly in the gas areas. Not alone is it confined to the proven fields, but is widening out to the eastern edges in Braxton and Upshur Counties in West Virginia. In older districts, such as Gilmer and Monongalia Counties, West Virginia, and Greene and Washington Counties, Southwest Pennsylvania, much new work is listed. Fields listed as gas reserves are being opened up and new reserves sought in the deeper drilling.

SOUTHWEST PENNSYLVANIA

In Greene County, Pennsylvania, Carnegie Natural Gas Co. deepened No. 1 Huffman in Franklin Township to 3,175 feet. The Bayard sand was at 3,125 feet. The total gauge was 82,000 feet.

In Richhill Township, Greene County, the Manufacturers Light & Heat Co. completed a test on the A. J. Sanders farm at 2,998 feet. The initial volume was 450,000 feet a day.

In South Franklin Township, Washington County, William Bungard & Co. completed a fair test on the Flora Clark farm, at 1,234 feet. Gas sand was at 1,189 feet with gas at 1,190 and 1,204-1,219 feet. It gauges 2,600,000 feet a day. In Chartiers Township, the Keystone Gas Co. drilled a gasser on the Albert Allison farm at 2,180 feet, the Fifth sand. It gauged 50,000 feet a day.

In East Finley Township, Washington County, Natural Gas Co. of West Virginia on the J. R. and Lillian Day farm drilled through the Fifth sand to a depth of 3,056 feet and got a dry hole.

In Deemston Township, Washington County, Keystone Gas Co. is spudding on the Harry Crawford farm. Otto Keys is down 1,005 feet on the Mordica McCarty farm, same township.

In South Franklin Township, Washington County, the Union Gasoline & Oil Corp. has rig up on the H. R. Post farm. The Carnegie Natural Gas Co. has reached 2,764 feet in the test on the Belle A. Jones farm.

In East Finley Township, Washington County, Duquesne Gas Co. is drilling at 716 feet on the M. B. Rogers farm. Union Gasoline & Oil Corp. is down 1,035 feet in No. 5 J N. Clutter. In Morris Township, New Oil & Gas Co. is drilling at 1,360 feet on the H. Saunders 10-acre lease.

In Amwell Township, Washington County, New Oil & Gas Co. has reached 2,865 feet on the Anna Chambers Phelan lease, and has started drilling on the Charles Bronder lease, and has rig up on the Hatfield farm.

In Greene County, the South Penn Oil Co. lost the tools on top of the Thirty-foot sand in the No. 9 on the Charles Harvey farm, depth 3,318 feet. The casing has been pulled to ream out and fish. In Perry Township, its No. 3 on the A. B. Price farm is being deepened. Drilling started at 1,871 feet and has now reached 1,900 feet. It was a former Injun sand gas well at 1,847 feet.

In Richhill Township, Greene County, the Union Gasoline & Oil Corp. has made a location for No. 4 J. Iams heirs. The Manufacturers Light & Heat Co. is down 1,635 feet on the W. Gunn farm and 920 feet on the C. Wolf farm.

In Dunkard Township, Greene County, Convex Glass Co. has rig up on the Leroy McLarnan farm. In Springhill Township, the Dun Marr Oil & Gas Co. is drilling at 3,010 feet in No. 4 David Hostutler.

In Center Township, Greene County, Carnegie Natural Gas Co. is drilling at 1,365 feet after cementing on the J. W. Milliken farm. In Richhill Township, this company is moving in on the W. O. Kincaid farm. Natural Gas Co. of West Virginia is down 2,705 feet in a test on the William Baltzell farm. The Fifty-foot sand was at 2,627 feet, 240,000 feet of gas showing at 2,632 feet.

The Equitable Gas Co. is busy with a drilling program in Greene County. Its test on the Mastrezat farm is down 639 feet; on the Johnson farm at 800 feet; on the Hennen farm at 202 feet; on the E. L. Brant farm at 986 feet; on the Lemmons farm at 1,475 feet. This company has also made a location for a test on the Rachel McDonald farm in Richhill Township.

Deep Tests

In Pleasant Township, Washington County, the deep test of Norwood Johnson and others on the James McBurney farm, 2 miles south of Hickory, is drilling at about 5,000 feet.

In South Union Township, Fayette County, William Snee and others reached a depth of 6,345 feet in the deep test on the Summit Hotel property on Chestnut Ridge and have a fishing job for the sand pump.

SOUTHEAST OHIO

In Athens County, Southeast Ohio. A. D. Townsend and others completed a second test on the Shelton farm, section 23, Lodi Township, in shale at 454 feet. It gauged 900,000 feet a day.

In Belmont County, Ruchland Development Association completed No. 10 John R. Lochary, N half section 25, Richland Township. It is a gas well in First Cow Run sand at 771 feet and gauges 1,088,000 feet a day.

In Jefferson County, Everett Ferguson & Son drilled a dry hole on the Alva D. Galt farm, section 30, Saline Township, through Berea sand to 760 feet.

In Knox County, Sterl C. Brown and others completed a 2-bbl. well on the Licking County Building & Savings Co. lease in section 14, Clay Township, in the Berea sand at 708 feet.

In Medina County, E. R. Edson & Son Co. struck a surprising volume of gas in shallow Berea grit in Chatham Township, Tract 17, Lot 4, Lillian E. Williams farm, at 495 feet. It gauges 1,000,000 feet a day. In the northwest part of Lot 2, same township, Oko Oil & Gas Co. completed a 1-bbl. well, No. 48 Jesse McVicker, in Grit at 498 feet.

In Morgan County, Lot 1,097, Windsor Township, Leland Burt and others completed a 3-bbl. well, No. 4 F. H. Tuttle, in Peeker sand at 439 feet.

In Perry County, Gas Producing Co. of Ohio, on the John From heirs, SE quarter section 31, Hopewell Township, drilled through Clinton sand to 2,880 feet. It had only a small showing and will be plugged.

In Vinton County, Kelch Oil & Gas Co. completed a 1-bbl. well, No. 3 Albert R. Kelch, in section 29, Brown Township, in Grit at 1,068 feet.

In Washington County, Baumgard and others test on the Mary E. Tice farm, section 24, Independence Township, is a 2-bbl. well in Injun sand at 1,540 feet. On Lot 786, Palmer Township, Metcalf & Jahn drilled a test on the H. H. Greenleas farm through the First Cow Run sand to 680 feet, and it was dry.

WEST VIRGINIA

In Murphy district, Ritchie County, West Virginia, Pyles Brothers completed a test on the M. V. Haught farm in Maxon sand at 1,561 feet and have a 1-bbl. pumper.

In Courthouse district, Lewis County, the Pittsburgh Oil & Gas Co. cleaned out and shot Nos. 2 and 4 S. I. and H. T. Fisher and increased production about five times.

Gas Wells

In Cabell County, the Sue Gas Co. completed No. 3 T. J. Gill estate in McComas district, gauging 3,960,000 feet of gas a day from Injun sand at 1,377-80 feet.

In Calhoun County, J. H. Ferrall and others completed a test on the Ira Heifner farm in Center district in Injun sand at 1,918 feet. It gauges 100,000 feet a day.

In Clay County, the Reed, Wheeler & Young Corp. completed No. 22 W. T. and J. H. Goshorn heirs in Union district in the Salt sand at a depth of 1,190 feet. It gauges about 93,000 feet a day.

In Harrison County, Lumberport Shinnston Gas Co. completed No. 2 O. C. Strother, Sardis district, in Fifth sand at 2,795 feet as a gas well gauging 50,000 feet of wet gas. It has also a small showing of oil.

In Lincoln County, the United Fuel Gas Co. completed No. 4,612 L. R. Sweetland in Laurel Hill district as a gas well at 1,716 feet. The gas gauges 700,000 feet a day from the Big Lime.

The big gas well of the week was in Ritchie County. In Grant district, near Bear Run, Roscoe Moats and R. W. Richards and others completed No. 3 Stout & Jackson in the Keener sand at a depth of 1,730 feet. It gauges 6,100,344 feet a day.

In Murphy district, Ritchie County, the William Shroder No. 4 J. A. Hays was dry at 1,860 feet.

In Wood County, E. C. Hartman drilled No. 3 Fred Delancy in Williams district through the Maxon sand to 1,335 feet and it was a dry hole.

Oriskany Gas Field

In Loudin district, Kanawha County, the test of the Owens Illinois Glass Co. on the L. A. Christy farm, which was reported last week as showing 77,000 feet naturally, was shot, and it now has a gauge of 365,000 feet a day with a rock pressure of 1,220 pounds. The total depth was 4,530 feet.

In Elk district, Kanawha County, material is in for United Fuel Gas Co. deep test on the M. F. Orth and H. C. Walker lease.

In Poca district, Kanawha County, United Carbon Co. test on the Ahaz Spencer farm is spudding. This company is building rig on the S. H. Milam farm, same district.

In Big Sandy district, United Carbon Co. is down 3,045 feet, deepening the No. 15 J. A. and M. F. Osborne to the Oriskany sand. This is by far the most important test now drilling in this new development.

In Malden district, the United Fuel Gas Co. is down 235 feet in the No. 4,643 and 575 feet in the No. 4,657, both on the George Creek Land & Mining Co. lease. Godfrey L. Cabot, Inc., is down 4,800 feet in the test on the W. D. Lewis farm; 2,160 feet in the William Tompkins No. 8; 3,852 feet in the Nellie B. Tompkins No. 2, and 1,580 feet in the No. 3; drilling at 4,788 feet, in the Oriskany sand, in the No. 10 on the Campbells Creek Coal Co. and showing about 315,000 feet of gas. The United Carbon Co. is drilling at 1,810 feet in the test on the J. Q. Dickinson farm.

In Elk district, the Columbian Carbon Co. is drilling at 1,020 feet on the Kanawha Valley Bank (Grant Copenhaver) lease. The Yoak Oil & Gas Co. is down 1,600 feet on the Goshorn heirs farm. Benedum & Trees are at 1,910 feet in the No. 2 Mary C. Wingfield farm. Godfrey L. Cabot, Inc., has rigged up on the Robert L. Bibby farm. The Glen Oil & Gas Co. has reached 3,910 feet on the Virginia Joint Stock Land Bank (Morse) farm. S. B. Avis, trustee, is

(Continued on Page 56)

California Field Report

GAS BLOW OUT IN HUMBOLDT COUNTY, IN EXTREME NORTH

By
L. P. STOCKMAN

LOS ANGELES, Calif., June 29.—The Texas Co. focused attention on Humboldt County, in Northern California, when its No. 2 Eureka, in section 22-3-1, blew out flowing an undetermined amount of natural gas while the crew was drilling ahead at 4,428 feet. The wildcat was brought under control, but there is still some gas leaking around the 13⅜-inch surface casing cemented at 1,100 feet. It is the most northerly wildcat in California that has shown anything of importance. The Texas Co.'s first well in the Eureka district was located in section 1-3-2 and was abandoned in August, 1935, as a duster at 6,133 feet. The company's No. 2 Eureka is encouraging as the development of commercial gas production would fulfill the requirements of several communities for natural gas.

The Seaboard Oil Co. has leased 5,000 acres of potential gas land in the northeastern section of Alameda County and location has been staked in section 13-3-3, 10 miles southwest of Tracy and about 6 miles east of Livermore. The Milham Exploration Co., predecessor of the Seaboard Oil Co., drilled two dry holes some time ago about 6 miles east of the latter company's new location. These were No. 1 Moy in section 24-3-4, abandoned at 4,002 feet, and No. 1 Connelly in section 2-4-5, abandoned at 5,800 feet. These tests are 6 miles southwest of the Tracy gas field, discovered by the Amerada Petroleum Co. in August, 1935. The Tracy gas field shows evidence, based on the initial daily production of new wells and the fact that this field was on commercial gas production for a period of approximately six months, of being of primary importance. The field is located in a relatively flat area, although a series of low, rolling hills extending southeastward from Byron plunge out into the floor of the level valley a few miles to the northwest. The area scheduled to be prospected by the Seaboard Oil Co. is relatively flat and practically devoid of any surface indications of structure.

McDonald Island

The Standard Oil Co., which a short time ago completed a well that has shown evidence of resulting in commercial production on McDonald Island in San Joaquin County, is driving piles for a second test to be drilled 2,400 feet south and 3,400 feet west of NE cor. of section 25-2-4. Standard's initial test showed a potentiality of 20,000,000 feet per day from 5,327 feet. The Standard's No. 1 McDonald Island, which is shut in under a pressure of 2,100 pounds, encountered two productive horizons, but is still on the border line marking the difference between commercial production and uneconomic production.

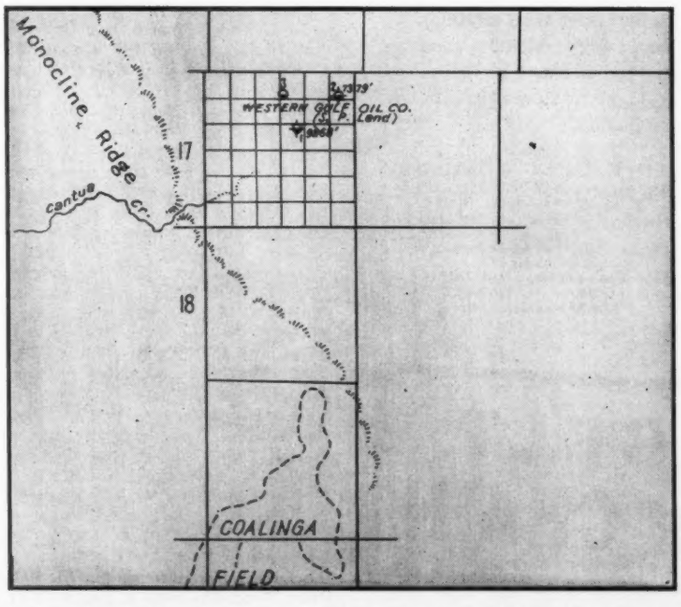
TANKER SHIPMENTS FROM LOS ANGELES TO DOMESTIC AND FOREIGN PORTS

	June 14		June 7			
	Total this week	Daily average	Total last week	Daily average	This year to date	Same time last year
Intercoastal-domestic:						
Diesel and gas oil	.....	.....	.....	.....	151,541	527,098
Gasoline	117,235	16,748	70,350	10,050	2,986,151	3,547,745
Kerosene	5,821	832	.....	.....	649,430	669,351
Foreign exports:						
Crude oil	.....	.....	77,480	11,069	4,323,897	4,911,377
Fuel oil	387,312	55,330	108,649	15,521	4,958,621	5,950,171
Diesel and gas oil	67,686	9,669	93,162	13,309	2,711,617	2,080,552
Gasoline	228,487	32,641	213,564	30,509	3,336,841	2,790,496
Kerosene	99,267	14,181	71,586	10,227	595,079	722,066
Other unfinished oil	.....	.....	.....	.....	16,894	56,161
Coastwise-domestic:						
Crude oil	235,316	33,617	.....	.....	3,514,195	2,647,166
Fuel oil	332,166	47,452	278,662	39,809	4,232,705	4,537,442
Diesel and gas oil	109,439	15,634	.....	.....	629,366	471,677
Gasoline	115,317	16,474	255,884	36,555	5,903,821	4,370,914
Kerosene	.....	.....	2,747	392	100,398	65,090

TANKER SHIPMENTS FROM SAN FRANCISCO TO DOMESTIC AND FOREIGN PORTS

Intercoastal-domestic:						
Diesel and gas oil	.....	.....	.....	.....	.....	157,258
Gasoline	.....	.....	75,094	10,728	147,054	.....
Kerosene	.....	.....	.....	.....	.....	149,715
Asphalt	.....	.....	.....	.....	68,586	280,849
Lubricants	.....	.....	2,931	419	27,673	24,692
Foreign exports:						
Crude oil	.....	.....	38,136	5,448	1,321,047	1,426,499
Fuel oil	.....	.....	19,662	2,809	1,392,424	838,604
Diesel and gas oil	61,303	8,758	.....	.....	550,617	576,789
Gasoline	85,815	12,259	.....	.....	1,589,481	1,412,060
Kerosene	.....	.....	.....	.....	389,174	447,556
Lubricants	11,419	1,631	.....	.....	150,074	115,593
Coastwise-domestic:						
Fuel oil	36,789	5,256	144,630	20,661	3,420,575	2,334,755
Diesel and gas oil	.....	.....	.....	.....	316,875	134,687
Gasoline	64,582	9,226	67,549	9,650	2,324,963	2,277,582
Kerosene	.....	.....	.....	.....	69,401	53,139

The Amerada Petroleum Co. No. 1 Emigh, in section 26-4-2 in Solano County, failed to show a large production of gas but may prove to be the discovery well in a new gas field of considerable importance. No. 1 Emigh, which first showed 20,000,000 feet of dry gas per day a few weeks ago, showed only 8,800,000 feet on a production test conducted from 4,485 feet with the 11¾-inch water string cemented at 4,278 feet and the hole finished with a 6⅝-inch liner carrying 210 feet of perforated. It was brought in flowing through 2½-inch tubing and was shut in immediately subsequent to completion and now shows a pressure of 1,360 pounds on tubing and 1,690 pounds on casing. The high pressure after being shut in tends to indicate that the recorded initial daily production of 8,800,000 feet of gas per day does not represent the well's maximum daily production. The Seaboard Oil Co. recompleted No. 3 Kern, in section 8-28-23, in the Buttonwillow gas field, Kern County, after deepening to 3,817 feet and returned it to production flowing 22,040,000 feet of gas per day. Top of the Eetchegoin was at 3,806 feet. The well has a present shut-in pressure of 1,260 pounds.



Western Gulf Oil Co. is working on its No. 3 in the Cantua district, Fresno County, which has all the earmarks of a commercial producer. It had an oil showing at 6,400 feet but is now at a total depth of 6,800 feet

Stevens

The Shell Oil Co., which completed an excellent well in the Stevens, or Old River, section of Kern County within the past month, staked two locations. The second well will be No. 6-29, located 991 feet from north and 325 feet from west line of SW quarter section 29-30-26. The Shell's third test will be No. 56-29, located 991 feet from north and 2,967 feet from west line of SW quarter section 29-30-26. The discovery well is holding up with clock-like regularity.

Three new wells were completed in the Round Mountain field of Kern County during the week. The largest was Honolulu Oil Corp. No. 45 in section 18-28-29, bottomed at 2,140 feet and finished with an 8⅝-inch water string landed and cemented at 2,075 feet. It was brought in pumping 586 bbls. of clean 16.3 gravity oil per day. Shell Oil Co. added two new wells during the past week. No. 6 Caldwell, bottomed at 1,625 feet but plugged back to 1,579 feet, was brought in pumping 124 bbls. of relatively clean 16.4 gravity oil per day. No. 13 Caldwell, in section 7-28-29, was brought in pumping 198 bbls. of 14.4 gravity oil per day from 1,895 feet after the hole had been finished with an 8⅝-inch water string landed and cemented at 1,844 feet and a 6⅝-inch liner carrying 52 feet of perforated.

Playa Del Rey

Eastern Oil Co., which picked up an oil sand in No. 1 D. R. L. & W., 1 mile east of the Playa Del Rey field of Los Angeles Basin, is experiencing difficulty in making a production test. The company was obliged to use approximately 200 tons of weight material to prevent a premature blowout. During the past week the Union Oil Co. completed No. 16 Vidor in the Playa Del Rey field, flowing 130 bbls. of relatively clean 22.8 gravity oil per day from 6,049 feet.

General Petroleum has conducted two preliminary production tests on its No. 1 Terminal, adjacent to Los Angeles Harbor, but has resumed drilling operations in the hope that deeper drilling to 3,500 feet will result in the discovery of light refinable crude oil. About 10 days ago No. 1 Terminal was put on a preliminary production test from 2,694 feet, and it came in flowing approximately 90 bbls. of 13.8 gravity oil per day. After being permitted to pro-

duce approximately 400 bbls., the well was killed and drilling operations resumed. Early this week the hole reached a depth of 3,019 feet. From this depth it flowed 195 bbls. of 16.8 gravity oil per day.

Montebello

St. Helens Petroleum Co. may test No. 7 P. & B. in the eastern extension of the Montebello field within the week. It showed favorably on a formation test, but may be deepened another 50 feet. It is bottomed at 5,585 feet and has a 9-inch water string cemented at 5,464 feet. This well is slightly lower structurally than the Richfield Oil Co. No. 1 Nutt, a recent completion brought in flowing 3,650 bbls. at 5,901 feet.

The R. R. Bush Oil Co., in the Santa Maria Valley field, may abandon No. 1 Hancock-Enos, in section 13-10-34. It encountered Franciscan rocks at 1,895 feet and the bit was stopped at 1,901 feet. No definite oil zone was encountered in the Monterey although a few minor showings will undoubtedly be given a test on the way out. The well is located 3,500 feet north of the Union Oil Co. No. 1 Adam, a 2,000-bbl. initial producer.

Javon

The Chanslor Canfield Midway Oil Co. picked up oil sand in No. 4-A Hobson in the Javon field of Ventura County, discovered by Continental Oil Co. a few months ago, and preparations are under way to run in and cement a string of casing at 4,573 feet. The oil sand, which is 4,728 feet deep, was topped at 4,597 feet, although a small showing was also logged at 4,305 feet. The oil sand was found several hundred feet higher than the same zone was encountered in the Continental Oil Co. No. 1 Hobson, the discovery well. The Continental Oil Co. has plugged back No. 5 Grubb in the San Miguelito field from 6,035 feet to 5,600 feet in order to straighten the hole.

The West American Oil Co. found oil sand in No. 1 Del Amo in the Dominguez area of Los Angeles Basin. This wildcat, located some distance from the Dominguez oil field, is bottomed at 9,001 feet and the company has landed a full combination string consisting of 9,000 feet of 5¾-inch casing which was cemented through perforations at 8,497 feet and which includes 503 feet of perforated. The company is so sure that it will be able to develop commercial production that gas traps and several flow tanks are being rigged up and erected. The Standard Oil Co. finished a new well in the Seal Beach field of Los Angeles Basin, No. 27 San Gabriel, but it was good for only 280 bbls. of 29.5 gravity oil per day from 6,470 feet after the hole had been plugged back from 6,550 feet. Production is cutting approximately 40 per cent but may clean up after the well has been flowed for several additional days. The Shell Oil Co. added a new well in the Dominguez field, flowing 540 bbls. of clean 30.9 gravity oil and 500,000 feet of gas per day from the "shallow" sand at 4,565 feet.

Potential Producer

The Wood-Callahan Oil Co. completed a small well in the Edison field of Kern County this week, No. 3 Needham, in section 21-30-29, pumping 62 bbls. of 14.6 gravity oil per day

(Continued on Page 70)

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Central West

Operations in Central Ohio, Kentucky, Illinois, Indiana

By GEORGE A. WHITNEY

FINDLAY, Ohio, June 29.—In Wood County, Johnston & Co. No. 1 on the Jacob B. Laman farm, section 28, Perry Township, is a gas well at a depth of 1,284 feet.

In Allen County, H. F. Kelley abandoned No. 1 on the Mary T. B. Sellers farm, section 30, Perry Township. N. E. Masters & Co. is drilling No. 1 on the George Ruble farm, section 11, Noble Township, same county.

In Hardin County, the Forest Gas Co. No. 1 on the Thomas A. Jones farm, section 13, Jackson Township, is a gas well in the Trenton lime formation at a depth of 1,353 feet.

In Sandusky County, Homer E. Keiser is drilling No. 17 Homer Russell, section 8, Jackson Township, and Klingberg & Co. are drilling No. 2 Edward Bowe, section 18, Scott County. In Rice Township, Worth, Montgomery & Co. are drilling No. 2 Nora F. Hetrick, section 31.

In Wyandot County, Ray C. Jones No. 1 N. E. Schindler, section 20, Crane Township, was a dry hole at a depth of 1,514 feet. Upper Sandusky Oil & Gas Co. No. 3 Ralph Veith farm, section 5, same township, is drilling. McPheron & Co. is drilling No. 1 Benjamin Secoy, same section. Kenova Oil & Gas Co.'s test on the E. & F. Horn farm, section 18, Salem Township, was a dry hole at a depth of 1,531 feet.

In Putnam County, C. K. Rodgers No. 1 Shipe & Perry produced an initial of 25 bbls. at 1,325 feet. Brown & Co. is drilling No. 1 Walter Williams, and E. K. Rodgers has a rig up for No. 2 on the Shipe & Perry farm, section 4, Blanchard Township.

In Ashland County, the Ohio Fuel Gas Co. No. 1 on the Mary Stanislawski farm, section 33, Jackson Township, is a dry hole at 2,872 feet. Faulkner & Phelps No. 8 on the Guy Z. Humm farm, section 29, Mihican Township, produced 18 bbls. in 48 hours. Ohio Fuel Gas Co. No. 1 on the Leo E. Koons farm, Lot 51, Sullivan Township, was a gas well at a depth of 3,610 feet.

In Lorain County, William Dempsey No. 1 on the A. E. R. Snyder farm, Lot 15, Avon Township, is a dry hole at a depth of 2,457 feet. Same party is drilling for the same party, No. 1 on the D. E. Cotton farm, Lot 28.

In Richland County, Ohio Fuel Gas Co. No. 1 on the Mansfield Building & Loan Co. No. 1 Worthington Township, is a gas well at a depth of 2,421 feet.

In Holmes County, the Ohio Fuel Gas Co. No. 1 on the Josephine Snively farm, Lot 7, Washington Township, is a dry hole at 2,904 feet.

In Summitt County, East Ohio Gas Co. is drilling No. 1 on the John Kauffman farm, section 36, Franklin Township, and No. 1 on the I. Mathia farm, same section.

In Coshocton County, the Preston Oil Co. No. 3 on the A. & J. Beatty farm, Lot 4, Newcastle Township, was a dry hole at 3,169 feet, and the same company is drilling No. 4 on the C. D. Mossholder farm, Lot 4, same county.

In Stark County, the East Ohio Gas Co. No. 2 B. L. Albright was dry at a depth of 4,340 feet.

In Cuyahoga County, C. A. McMillan No. 1 on the Geisendorfer farm, Lot 1, Independent Township, section 1, was a dry hole.

In Hocking County, City Natural Gas Works No. 1 on the Ellen Oliver farm, section 6, Marion Township, was a dry hole at 2,580 feet.

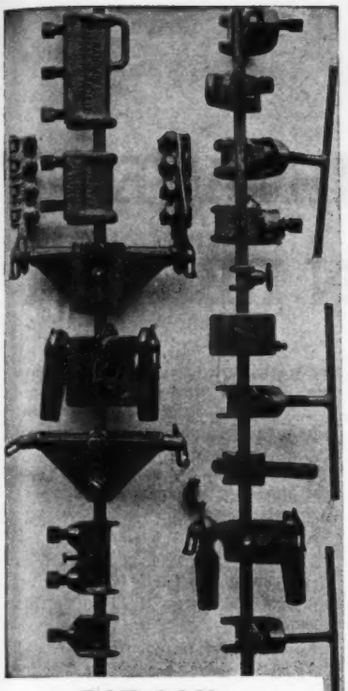
INDIANA FIELD

In Daviess County, Indiana, Oliphant & Sage No. 1 on the George W. Price farm, SW NE section 34, Barr Township, is good for 1,500,000 feet of gas.

In Vanderburg County, Evans Oil & Gas Co. No. 1 on the Oscar Birch farm, section 30, was a dry hole.

In Johnson County, Dwight LaGrange is drilling No. 1 J. L. Hassett & Co., NW SW section 4, Franklin Township.

In Perry County, A. B. Bement No. 4 on the Harvey Hartwick farm, section 24, Clark Township, is a gas well, and the McGrain Oil & Gas Corp. is drilling a test on the John Farley farm, section 20, Clark Township, same county.



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Among Gulf Coast Drilling Contractors

Cron & Gracey are moving in a rig to the Placedo field to work over No. 1 Pickering & Roos for Barnsdall Oil Co., and have seven other active rigs located as follows: One at Roanoke for Shell Petroleum Corp, one at Manvel and West Columbia for Texas Co., two at South Houston for Stanolind Oil & Gas Co., and one each at Barbers Hill and Damon Mound for Sinclair Prairie Oil Co.

H. J. DeArman has abandoned his No. 1 First National Bank, located at the Amelia field and has one rig running at the Corpus Christi field on the Isensee lease for Sinclair Prairie Oil Co.

Glenn H. McCarthy, Inc., is drilling No. 12 White and rigging up for No. 2-B White at the Anahuac field for Humble Oil & Refining Co. and is drilling below 4,200 feet on No. 1 J. B. Langham, located in the Amelia field. The latter test is being drilled for himself.

Nicklos Drilling Co. has received contract from the Pan American Producing Co. for a test on the Sorrento dome in Ascension Parish, Louisiana, to be spudded about July 1. For the same company at Port Barre No. 2 Cormier was drilled to 5,385 feet and plugged back to 3,900 feet, where it will be sidetracked. In the Tepetate field for Continental Oil Co. No. 1 Fruge is drilling below 7,534 feet.

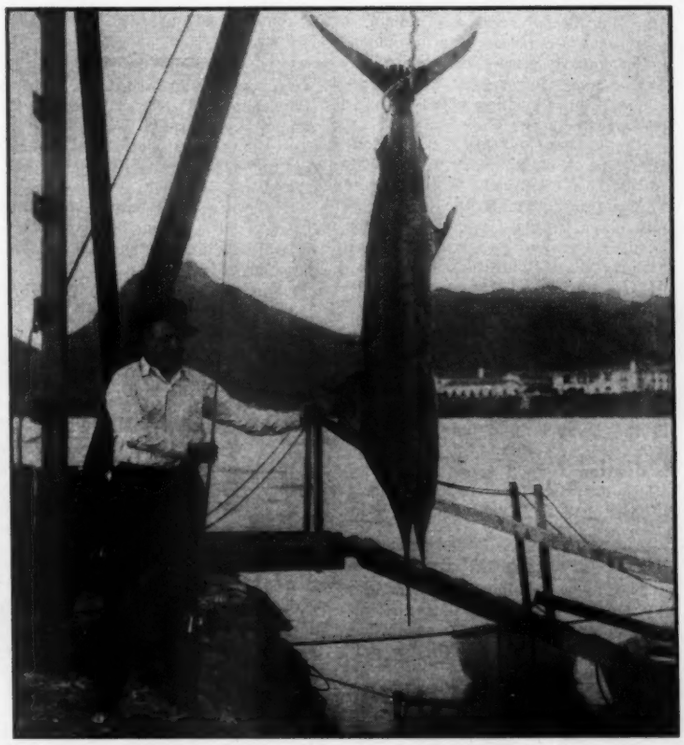
Rutherford Drilling Co. failed to make a well in the regular producing horizon of the Van Vleck field on Skelly Oil Co. No. 1 Langham and is drilling to the 8,100-foot pay where another test will be made. Three other rigs are active in the field and are located on the Moore and Cobb leases.

Smith & McDannald are preparing to test a wildcat in Zavalla County which has the appearance of opening up production from the Chalk for Bay Oil Corp., and are preparing to test two wells in Coastal Louisiana, located at St. Martinsville, for Continental Oil Co., and at Jenning for Shell Petroleum Corp. The latter test is located on the flank of the dome about a half mile from production. At South Houston derrick is being built for No. 1 Lamb, which will be drilled for themselves, and progress is being made on No. 1 Pittman, which is being drilled for Stanolind Oil & Gas Co. No. 3 Ford has been completed at Hastings for Stanolind Oil & Gas Co. and progress is being made on three other wells located in Orange County for Tide Water Oil Co., one at the Lakeview Prospect in Wharton County and one at Louise for Pure Oil Co.

Ben (Bud) Coyle extended the Jeanerette field approximately 1,280 feet east and opened a new producing horizon when he completed No. 1 Carter in a new sand at 7,060 feet for an initial production of 32 bbls. per hour. The hole was drilled to 9,602 feet and was plugged back and tested at its present depth.

Harry Edwards, of Edwards Drilling Co., has set a mark to shoot at in fast time in the drilling of his

(Continued on Page 56)



Al Buchanan, drilling contractor of San Antonio, Tex., with the large sailfish he landed in the Gulf of California recently. Accompanied by friends, Mr. Buchanan flew to Guaymas and embarked on an extended fishing trip on the boat of his associate, G. A. C. Halff, of San Antonio

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Michigan Field Report

GAS WELLS PREDOMINATE IN WEEKLY COMPLETION REPORT

By
PAUL A. ELLIOTT

MUSKEGON, Mich., June 29.—In the face of declining oil production, an insufficient number of new producers and comparatively small output to meet crude demands, Michigan operators' only consolation last week was the recent rise of 10 cents a barrel in crude prices establishing a new four-year high, and continued success in new natural gas open flow.

The number of completions continued at a comparatively high total of 23, including 11 gassers with a combined open flow of 186,100,000 feet daily, six new oil wells and one boosted by acid treatment adding 1,035 bbls. initial, and six dry holes.

Gassers

The 11 new gas wells ranged from 2,400,000 to 47,500,000 feet daily open flow and averaged about 17,000,000 feet per well keeping up Michigan's recent increasing importance as a gas-producing area.

Belvidere-Montcalm

Hyatt & Norton No. 2 Milo Eckert, C NE SE section 10-12n-7w, Belvidere Township, Montcalm County, gauged 47,500,000 feet open flow from Michigan Stray sands at 1,242-63 feet.

Midland Petrol & Gas Co. No. 1 E. Higbee, C NE NW section 9, same township, flowed at the rate of 26,500,000 feet from the Stray sand at 1,265-1,309 feet.

Hyatt & Norton also completed their No. 2 Tom Sutherland, C SW NE section 5, also in Belvidere, for an open flow capacity of nearly 20,000,000 feet daily. The fourth and smallest of the Belvidere quartet was Reginald M. Burch, trustee, No. 2 Morse and Edmore State Bank, C NE SW section 2, which made about 11,300,000 feet daily at 1,228-61 feet.

Two late completions drilled into the Michigan Stray sands Friday night added 40,500,000 feet open flow to the daily potential of Belvidere Township.

Kinwell Oil Co. and the Muskegon Development Co. No. 1 Flenk, C NE NE section 15, gauged 22,500,000 feet, while Hyatt & Norton No. 2 Edmore State Bank, C NW SE section 2, made 18,000,000 feet daily.

Millbrook-Hinton

Mohawk Oil Development Co., Inc., No. 2 Maggie Keilholtz, C NW NW section 33-13n-7w, was the larger of two completions in Millbrook Township, Mecosta County, making 10,000,000 feet daily at 1,320 feet total depth.

Stewart-Atha, Inc., No. 5 Houghton, NE NW section 33, same township, had an open flow capacity of 8,500,000 feet a day when drilling was suspended at 1,314 feet, or 31 feet in the Michigan sand.

Columbia Oil & Gas Co. No. 1 Ralph Swett, smallest gasser on the list, was rated at 3,400,000 feet daily, located C SE NE section 23-13n-8w, Hinton Township. It was drilled only 9 feet into the pay, however, and may be deepened.

New Haven-Gratiot

Crystal Oil & Gas Co., Inc., brought in the largest gasser in the New Haven Township, Gratiot County, field, near the Crystal oil field, when the No. 3-B Ben Shaver, C SE SE section 4-10n-4w, made an open flow of 13,000,000 feet.

Gordon Oil Co. No. 1 Robert B. Shaver, C SE NW, same section, flowed at the rate of 5,500,000 feet daily. Both were about 970 to 975 feet deep. Allied Petroleum Corp. No. 1 Fred J. Graham, C NE SW section 31-11n-4w, Sumner Township, also was being completed in the gas sands.

Midland County

Pure Oil Co. No. 2 J. P. Balch, C S SE SW section 2-13n-2w, Jasper Township, Midland County, which made 100 bbls. naturally, increased to 425 bbls. after acid treatment at a total depth of 3,433 feet.

Pure No. 1-A John Holden, SE NW NE section 13, also Jasper Township, or the Yost area, was rated good for 150 bbls. a day from the Dundee at 3,448 feet. Located near the northwest corner of Porter production, it was considered further proof of a more direct connection than previously recognized between the Porter and Jasper pools, now gradually being developed into a single field, by far the largest in the state.

Rex Oil & Gas Co. No. 4 Frank Howland, NW NW SW section 23-13n-1w, an edge well in the Porter Township area, finally was completed for about 90 bbls. a day from the Dundee.

Pure No. 1 Bond-Rayner, SE NW SE section 11, a Porter Township extension test about 1½ miles ahead of the proved area to the northeast, was dry and abandoned at 3,016 feet.

Pure No. 1 Trichler, C N NW NW section 11, Jasper, was treated with acid after striking a promising show in the Dundee in a hole drilled to 3,454 feet. Another test being acidized after a good show in Dundee oil sands was Dibble Brothers No. 1 Lippert, SW SW NE section 7, Porter Township.

Crystal-Montcalm

Two tests previously drilled into the Dundee pay sands but not yet completed pending acid treatment added 380 bbls. initial in the Crystal-Montcalm field.

Fortney Oil Co. No. 3 H. J. and I. Fisher, NE NW NE section 2-10n-5w, Crystal Township, made 200 bbls. initial after acid treatment in Dundee.

Daily Crude Oil Co. No. 2 Fulford, SE NW SW section 36-11n-5w, Ferris Township, Montcalm County, flowed 180 bbls. against heavy backpressure and was estimated good for double this amount if allowed to produce wide open. It was drilled to 3,206 feet, 4 feet in Dundee lime.

Six other tests were nearing Dundee completions in the two-townships field.

Geneva—Midland

Two Brehm & Hollman Oil Corp. tests in the newly developing pool in Geneva Township, Midland County, were nearing Dundee completion. The one was the No. 1 B. F. James estate, NW SW NW section 20-15n-2w, and the other was the No. 1 Hyde, SW NW SW section 21. Both were shut down pending drilling into the pay sands below 3,500 feet.

Isabella County

Renewed interest in Denver Township, Isabella County, was aroused by the 200-bbl. flow of E. Schelling No. 1 Varney well, NE SE SW section 34-15n-3w, drilled to 3,590 feet.

Recent developments in this area, neglected since the days of greater excitement in the Porter and Crystal fields, have indicated a connection between the Leaton pool in Denver and the original Mount Pleasant pool in Chippewa Township, Isabella County. Nine other tests are drilling or under permit as locations in Denver.

Ogemaw County

Ogemaw Crude Oil Co. No. 1 Frank Baumchen, NW NW SW section 27-22n-2e, West Branch Township, Ogemaw County, was completed at 2,621 feet for 90 bbls. initial in the Dundee topped at 2,551 feet.

Five other West Branch tests and three in Mills Township, same county, were drilling in Dundee or nearing completion.

Thompson Brothers, Inc., No. 1 J. Lee Huffman, SE SW SW section 30-21n-4e, Richland Township, Ogemaw County wildcat, was abandoned at 1,907 feet as a failure with formations running too low.

Beaverton—Gladwin

M. F. Whitehill, pioneer developer in the Beaverton Township, Gladwin County, field, was completing his No. 1 Mark King, SW SW NW section 2-17n-2w, Beaverton, in the Dundee with prospects of success.

West Michigan

Jacob Bolema and the Overland Petroleum Co. failed to strike oil, gas or water in the upper Traverse in a Muskegon County wildcat well, the No. 1 Mary Bolt, SE NW SE section 10-10n-13w, Casnovia Township.

The test, first drilled in the county in several years, had reached a depth of 2,535 feet Friday and was in the lower Traverse on the way to the Dundee.

Three other West Michigan wildcat tests were expected to drill into the Dundee this week in three counties.

J. H. Barton No. 1 Smith, SE NE NE section 29-10n-10w, Nelson Township, Kent County, topped the Dundee and had drilled several feet in at 2,950 feet.

C. W. Teater No. 1 McCabe estate, NE SW SW section 26-20n-12w, Newkirk Township, Lake County, also was expected to test the Dundee this week.

Northern Development Co. No. 1 Burke, SW SE NW section 26-17n-15w, Logan Township, Mason County, was in the Dundee limestone at 2,550 feet and drilling ahead.

Dragoon Development Co. No. 1 W. K. Young, SW NW NW section 15, same township, had reached a depth of 2,675 feet on the way to the Sylvania as a deep test. A third test also was drilling toward the Traverse, Sylvania Oil Co. No. 1 Campbell, NE SW SW section 10, Logan Township.

Jacob Bolema Red Wing Development Co., NW NW NW section 15-21n-16w, Manistee Township and county, was drilling Friday at 1,420 feet. Another test was started in section 8, Manistee Township.

Muskegon Development Co. was driving pipe in the No. 1 B. Doll, SW NE SE section 8-9n-14w, Ravenna Township, a new wildcat.

Dry Holes

Four wildcat tests were pronounced "dusters," to be plugged and abandoned, in Crawford, Huron, Ionia and Saginaw Counties. T. F. Caldwell, Inc., No. 1 Huston-Lincoln, NW SW SW section 7-25n-1w, South Branch Township, Crawford County, a north central, lower Michigan, wildcat, will be abandoned in the Dundee after striking bottom water at 3,198 feet, or 131 feet in the limestone.

Wallace Markle abandoned No. 1 Opaka, NE NE SE section 4-15n-11e, Grant Township, Huron County, in the Thumb district east of Saginaw.

Though not yet abandoned, A. H. Weber No. 1 DeLong, SE SE SE section 35-16n-3e, Garfield Township, Bay County, showed little hope of success after drilling more than 30 feet in the Dundee limestone without a show.

In Berlin Township, Ionia County, Terry Dale Michigan Corp. No. 1 Tew, SW SW NE section 12-6n-7w, also was reported a Dundee failure at about 2,875 feet despite a light show 17 feet higher.

B. J. Skinner No. 1 Sheldon, SE SE SW section 11-10n-3e, St. Charles Township, Saginaw, also was dry in Dundee, while J. H. Hibbard abandoned his location for No. 1 Woodward, SE NW SE section 22-10n-5e,

(Continued on Page 60)

North Louisiana, Arkansas

WITH RODESSA SLOWING UP, INTEREST IS IN TEST WELLS

By MITCHELL TUCKER

SHREVEPORT, La., June 29.—The progress of important wildcat tests in southern Arkansas and northern Louisiana, numbering about 20 in all, held the center of attention in the past week, as completions and new locations within the Rodessa pool reached an all-time low. Testing of the Permian lime wells at Smackover was also closely watched. The discovery of a prolific Trinity gas zone in Lincoln Parish came in for its share of attention.

Any of these 20 deep exploratory tests is considered to have sufficient merit to be a deep field opener in the not far distant future. The well that continues to make history is the Ohio Oil Co. No. 6 Holloway, now the deepest test ever drilled in the Arkansas-Louisiana territory.

Production by Pool

Estimated daily gross production all companies week ending June 26:

NORTH LOUISIANA

Bellevue	565
Caddo light	4,100
Caddo heavy	2,375
Converse	1,020
Cotton Valley	360
DeSoto and Red River	1,455
Elm Grove	430
Haynesville	3,065
Holly	130
Homer	2,536
Pleasant Hill	155
Rodessa	55,735
Sarepta-Carterville	505
Urania	2,800
Zwolle	1,095
Total	76,325

SOUTH ARKANSAS

Champagnolle	2,910
El Dorado	2,150
Lisbon	290
Miller County	1,015
Nevada	870
Smackover light	2,200
Smackover heavy	17,800
Stephens	585
Urbana	1,840
Total	29,660

Texas side of Rodessa field—4,825 bbls. dly.

WEBSTER PARISH
Cotton Valley Pool

The Ohio-Holloway well is in section 28-21-10, Webster Parish, in what has heretofore been known as the gas zone of the Cotton Valley pool. The well is standing at 8,370 feet, while preparations are being made to run casing. On drill stem test this well tested 25,000,000 feet of wet gas from 8,130-45 feet. The gas was mudded off and drilling continued to about 8,350 feet, where another gas zone is reported to have been penetrated. At a depth of 8,369 feet a change in formation was reported to be evident, and at this time it was decided to run pipe as a large amount of open hole is being carried. The thickness of the Travis Peak (lower Glen Rose) in this section was about 2,500 feet, and the present gas zones are presumed to be from marine (lower) Trinity zones. Operators have announced that they will withhold all information on this well until after pipe is set and it is thoroughly tested.

Cotton Valley Reviewed

The occurrence of gas and attractive possibilities of oil in these lower members of the Trinity has prompted considerable review and discussion of the old Cotton Valley pool, which has been producing since 1921.

The Blossom sand, at an average depth of 2,500 feet, contained oil, gas and water, and occurred in a dome shaped anticline approximately 4 miles long and 3 miles wide, with an axial northeast-southwest trend. The gas area of this structure covered about 2,700 acres. The Anhydrite zone (Trinity) was later found to be productive of gas at about 100 feet above the base of the Anhydrite at depths from 4,300 to 4,400 feet. Initial gas volumes from this horizon were small. The third zone found to be productive was designated as the Davis (of local origin) and comprised three lenticular sands, all carrying oil and gas in the top of the lower Glen Rose formation. The axis of these two Trinity structures conformed to that of the Blossom sand, although lying slightly to the south.

The only other deep test providing any correlative information was Magnolia Petroleum Co.'s McCook-Hibbler No. 1 in section 22, which was abandoned at 7,006 feet after encountering sand from 6,945-58 feet. This sand tested salt water, but there was considerable question as to its source. High pressures were in evidence here.

It has long been the contention of some geologists that the marine beds of the lower Trinity formations were possibly underlying the Cotton Valley pool, and if so they had excellent possibilities of producing oil and gas. This assumption was partly based upon the showings encountered in the Pine Island deep test, Dixie-Dillon No. 92, found about 200 feet below the base of the red beds (middle Trinity).

The J. P. Evans No. 1 Crichton, gas-distillate discovery well in section 35-18-9, continues to produce from 80 to 100 bbls. per day of high gravity distillate. Derrick is now being erected for the second test of this attractive structure, which is to be known as the J. P. Evans No. 1 Johnson, SW NW SW section 36-18-9. At least seven more tests are expected within this immediate area soon, as short term leases require the drilling or forfeiture of leases prior to September 6, 1936.

The Rodessa Field

With only three completions, all within the proven limits on the Louisiana side, Rodessa supplied very little of interest for the week. Six new locations for the further development of presently productive properties were staked on the Louisiana side, while none were begun in Cass County, Texas.

The present Texas proration order covering the Cass County wells is upon a volumetric withdrawal basis, and it is hoped by some that efforts will later be made to place the entire pool under this method of determining daily productions. Although the Texas order permits wells to produce the 275 bbls. daily as in Louisiana, it does provide that wells having a gas-oil ratio of 2,000 to 1, or more, shall be permitted only a volumetric displacement of 550,000 feet per day, which may be either oil, gas or water, as the well proves itself capable of producing. Should this practice be extended into the high gas-oil ratio areas on the Louisiana side, it is felt by many that a step toward true conservation would be effected.

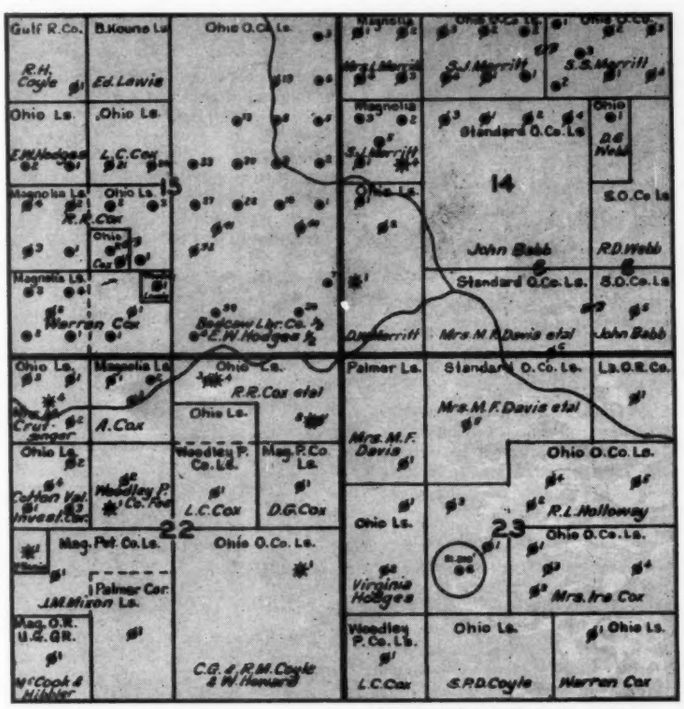
American-Liberty Oil Co. No. 1 Rambo, in the Rives Survey of Cass County, the foremost well to the southwest, is now reported to be producing only gas after acidizing with 3,000 gallons. Heretofore the well had been incapable of making its oil allowable, but after the acid charge the pressures greatly increased, resulting in the well going entirely to gas.

Marathon Oil Co. No. 1 Willis, a short distance west of American-Liberty's Rambo southwest extension well, is reported to have found the top of the Anhydrite 72 feet lower than in the Rambo well, indicating a rather steep dip of the beds at this point, and possibly defining the southwestern limits of the Rodessa pool.

Comparatively few bottom-hole pressures have been taken in the Rodessa pool, and not sufficient to permit any calculation of reservoir displacement per pound drop in pressure. Two static bottom-hole pressures were taken last week on Pelican Oil & Gas Co. Sexton property, each showing 2,100 pounds. This property has heretofore undergone heavy withdrawals, but no pressures were taken prior to this time. It has been previously reported that wells on this lease were making some salt water, but this statement has been denied by the operators.

Close Spacing on Town Lots

Close spacing of wells along the main street of Rodessa continues. In several cases the 50-foot lots have one or more stores facing the street, with an oil well in the back of the lot. W. & D. Corp. has had a gas-distillate well on Lot 5, Block 21, for some time. J. Edward Jones and others are now erecting derrick on Lot 4, Block 21, for an offset not



—Walter E. Wylie, Maps, Shreveport.

Heart of the Cotton Valley pool, Webster Parish, Louisiana, where Ohio Oil Co. may open the deepest field in northern Louisiana by its No. 6 Holloway, section 28-21-10

over 40 feet from the W. & D. Corp. well. Had the rig over the latter well not been dismantled, there would be scarcely room for the two derricks.

Certain operators have expressed the thought that such heavy concentrations of gas withdrawals will result in lowering the pressure to the point where oil can be successfully produced. No bottom-hole pressures have been taken within the townsite area.

North of Rodessa

Acreage which was heretofore considered to be beyond the northern limits of the Rodessa field came in for some attention last week when Standard of Louisiana purchased the NW quarter of section 10-23-16, for a reported consideration of $15,000. Standard's purchase here is thought to be significant in that the northernmost well toward this property is owned by this company, known as its No. 1 Zylks. This well encountered the pay zones of the Glen Rose about 90 feet higher than in other wells a short distance to the south. Possibly the presence of a lateral fault is indicated here.

There has been considerable speculation as to the reason for the apparent retrenchment of activity and completions at Rodessa. Perhaps this is not particularly significant at this time, for during the last two weeks very few wells were scheduled to reach the point of completion, while there are now about 20 wells in the process of cementing their oil string, and should be reported as completions within the next seven days.

The several combining forces which have been mentioned as retarding the drilling of new wells at Rodessa, particularly on the Cass County side, may be briefly enumerated as: (1) An increasing number of wells are proving to be capable of efficiently producing gas only, and as there is very little, if any, sale for the gas, the drilling of such wells is not attractive. (2) Speculation continues as to what will be done by the Louisiana legislature in the matter of more strict conservation, while the granting of July allowables may be indicative of what to expect in the future. (3) Some operators appear to be marking time to see what action will be taken by the Texas Railroad Commission to place the Cass County wells on a more even basis with other Texas pools. (4) The predominence of gas appears to be discounting the high oil recoveries per acre originally estimated for the pool.

Details of the Rodessa completions follow:

Arkansas-Louisiana Gas Co. No. 17 Rodessa Oil & Land Co. flowed 22 bbls. per hour through one-half inch tubing choke from a total depth of 5,990 feet, elevation 221 feet. Saturation was first encountered at 5,967 feet. Casing pressure indicated at 900 pounds; tubing pressure 500 pounds.

Magnolia Petroleum Co. No. 4 Tyson heirs topped the saturated zone at 6,020 feet and was completed at 6,095 feet for an initial flow of 22 bbls. per hour through one-eighth inch tubing choke, after treating with 3,000 gallons of acid. Tubing pressure measured 1,000 pounds; casing pressure 1,200 pounds.

United Gas No. 5 M. L. Pitts Unit found saturation at 6,007 feet, and flowed 16 bbls. per hour through one-quarter inch tubing choke from a total depth of 6,040 feet, after being treated with 1,500 gallons of acid. Tubing pressure measured 500 pounds; casing pressure 300 pounds.

Bienville Parish

Bienville Parish is now assured of another deep test as J. W. Leonard and others are erecting derrick for No. 1 Courtney, SE cor. section 5-17-7w.

Grant Parish

Acadian Production Co. No. 1-B Swope, section 18-9-1e, was completed for a 20-bbl. per day pumper in the Urania pool. The drilling rig is now being moved south for the drilling of their No. 2-B well.

Lincoln Parish

A new deep gas producing horizon in the Travis Peak (lower Glen Rose member of the middle Trinity) was revealed June 26 in a drill stem test on Brown, Lide & Greer No. 1 Gardner, section 10-17-4, in the Driscoll area of Lincoln Parish.

An estimated volume of 75,000,000 feet of highly saturated sand was obtained from 6,505 to 6,574 feet. Gas saturation was topped at 6,466 feet, where a 10,000,000-foot showing was estimated. Subsequent deepening revealed increasingly heavy saturation and slight oil stains down to 6,531 feet. Operators plan to run casing before fully testing the well.

Possible structure in lower formations had previously been indicated when No. 1 Fowler, one-fourth mile north, produced gas from the upper Glen Rose section at 5,300 feet. This same Glen Rose horizon has been found productive about 7 miles south and east by the Davis Brothers Lumber Co. No. 1 Davis Church structure, located in Township 10n, Ranges 4 and 5w, Bienville Parish. Further exploration of these gas horizons is expected immediately.

The Arkansas-Louisiana Gas Co. owns the gas rights under the Gardner block, and if the test to be made next week does not reveal the sand capable of producing oil, they will take over the operations of the block. This company is now considering the possibility of erecting a gasoline absorption plant in this area, where it would also connect to its Shreveport-Monroe trunk line.

Morehouse Parish

Morehouse Parish continues to come in for a large share of the leasing and geophysical activity now under way in northern Louisiana. The Magnolia, H. L. Hunt, Gulf and Superior companies were prominent by their activities here last week. Within the past three months Superior Oil Corp. has assembled a block of approximately 20,000 acres.

Sabine Parish

Hunter Co. found its No. 39 4-L Company in section 33-8-11 dry in sand at a depth of 2,717 feet, and abandoned the hole.

A. H. Tarver No. 2 Baker, section 36-8-12, has been abandoned at a depth of 5,225 feet after three months of fishing for stuck drill stem and other tools. Plans for drilling a new hole to the proposed Trinity objective have not as yet been announced.

ARKANSAS

No completions were recorded in Arkansas last week, but attention remained centered on the several wells now in the stage of completion in the Snow Hill area near Smackover.

LaFayette County

Ohio Oil Co. has decided to plug back and test upper formations in its No. 3 Bodcow Lumber Co., after encountering only salt water in a drill stem test from 7,626-98 feet. An electric log made of this section showed a very porous 44-foot sand section of the Trinity here, which some are prone to think indicates the possible accumulation of oil in favorable structural traps in this formation elsewhere. The well has been plugged back to 3,600 feet, where casing is being perforated for a test of shallower sands.

Superior Oil Co. of California is reported to have staked location for a proposed 10,000-foot test in the SE NW section 31-18s-24w, on a recently assembled block.

Four shooting crews continue their activity in the south and southeastern portion of the county.

Ouachita County

Completions of the Permian lime wells at Snow Hill have been slow due to cementing of casing, and preparations necessary to be made for testing.

The appearance of formation water in the Phillips-Reynolds discovery well, section 27-15-15, somewhat discounted the potentialities of the upper Permian zone this week. On 24-hour test this well produced 12,750,000 feet of gas, 420 bbls. of dark colored distillate, 16 per cent salt water and 6 per cent b.s. The Reynolds lime (Permian) was topped at 4,896 feet, and casing set 5 feet above, or at 4,891 feet, and it is possible that this water is coming from the lower section of the Travis Peak, where it might normally be expected.

Standard Oil Co. No. 3-B Reynolds, total depth 4,192 feet, tested 6,000,000 feet of gas with 85 bbls. of oil in 24 hours, 6 per cent mud and b.s., through 1¾-inch choke. Operators are continuing to test.

Lion Oil Refining Co. No. 1 Reynolds and Berg, in section 28-15-15, tested 35,000,000 feet of gas with 195 feet of salt water on drill stem test, 4,795-4,820 feet. Testing will be continued.

Five additional tests have been staked in the immediate vicinity of this activity, one by J. E. Crosbie, Inc., and four by M. Edward Jones and others.

EAST TEXAS BORDER

The extensive geophysical work being carried on by the major companies in the East Texas border counties cannot be ignored. Nine crews are now reported in this area in search of structure and possible locations for wildcat tests.

Four crews are now working in Harrison County, on the west edge of the Waskom field. Shell Petroleum Corp. is shooting in the neighborhood of Jonesville. The Amerada is reported to have a crew in Cass County checking the J. Eaton and Douthet Surveys, and another in Marion County west of Jefferson. Atlantic Oil Refining Co. has two crews south of Harleton where Pure Oil Co. continues to shoot northwest of Carthage, Panola County. Extensive work has heretofore been done south and east of Carthage. Sinclair Prairie is reported to be active in the Woodlawn area of the same county.

Bowie County

Westmount Oil Co. No. 1 Phillips, J. W. Hancock Survey, is reported to be at its contract depth, with disappointing results. Hard sand and red beds were cored from 3,673-87 feet. Operators are coring ahead.

Shelby County

F. E. Mulroy and others have assembled a large block of recently geologized acreage centering around the D. T. F. Yordt Survey, where they plan a 3,600-foot test immediately.

Eastern Fields

(Continued from Page 50)

at 1,765 feet on the Grant Copenhaver 145-acre lease. The United Carbon Co. is down 1,010 feet on the Henry C. Smith farm. The West Virginia Gas Corp. has reached 3,650 feet, deepening the test on the J. H. Cooper farm.

New Operations

In Cabell County, R. H. Adkins and others have made a location on the Salt Rock school property in McComas district. Adkins & McComas are rigging up on the Caldwell heirs farm on the Guyandotte River.

In Gilmer County, Massey & Jarvis are building rig on the George Heckert heirs (now Vestie Ward) farm on Leading Creek in Troy district. In this district, Jackson & Garrison have started drilling on the Alvie Bennett (mapped George Heckert) farm and the C. and H. Oil Co. on the F. B. Wilfong farm, and F. G. Bish on the Joseph Steinbeck farm. In Center district, K. M. Hunt and others are building a rig on the A. L. McClain farm.

In Lincoln County, A. N. Henson, trustee, is moving on the Grover Reynolds farm on Big Battelle Creek in Carroll district. On One Mile Creek in Sheridan district, United Fuel Gas Co. is spudding No. 4,665 Susan Adkins.

In Marshall County, Guy B. and A. B. Patterson are drilling on the A. Kirby farm, Fish Creek, Liberty district. In Lincoln district, Marion County, Victor E. Tennant is drilling on the Mrs. E. Kuhn farm.

In Monongalia County, Philadelphia Oil Co. is spudding on the Alex Hennen farm on Camp Creek of Dunkard Creek in Battelle district. On Days Run in Clay district, this company is building rig on the J. J. Moore farm. Dun Marr Oil Co. is building rig for No. 3 N. Tennant, Clay district.

In Pleasants County, Max Oil Co. is drilling on the N. H. Williamson farm, Lafayette district. Here W. J. McCullough has a rig on the R. H. Wilson farm. On Big Run in Union district, Homer Smith is drilling on the Homer Smith (mapped Oliver Gorrell) farm.

Drilling Contractors

(Continued from Page 53)

No. 1 E. D. Farmer at Pickett's Ridge, Wharton County. The well was spudded June 16. After drilling to 790 feet, operators discovered the location was out of line and the derrick and rig were skidded 15 feet and a new hole started. Friday, June 26, the well was in the sand at 4,700 feet, with 7-inch casing cemented. Contract was received from the Kenben Oil Co. for a second well to be drilled in the Dickinson field in Galveston County.

Oklahoma Operations

By DAL DALRYMPLE

OKLAHOMA CITY PACES STATE WITH 21 PRODUCERS IN WEEK

Field operations in Oklahoma continued at summer heat in the last seven-day period, with 77 wells being officially completed to make it one of the busiest weeks this year to date. Sixty of the completions were new oil wells, one was a gas well, two were old completions drilled deeper, and 14 were dry and abandoned. Again, the Oklahoma City field set the pace with 21 oil wells completed, 19 of which were in the Capitol extension and two in the zone between the north end of the old field and the extension. Operators in the prolific Fitts field of Pontotoc County accounted for nine of the new oil wells, with two in the nearby Jesse pool. A wildcat well in McIntosh County was completed as a discovery gasser, and wildcats in Payne and Okfuskee Counties were abandoned.

New work did not keep pace with completions, although work was getting under way at 45 locations. These included 40 new wells and 5 old wells being deepened or plugged back. The new work included five wildcats, one each in Love, Marshall, Garvin, Stephens and Seminole Counties.

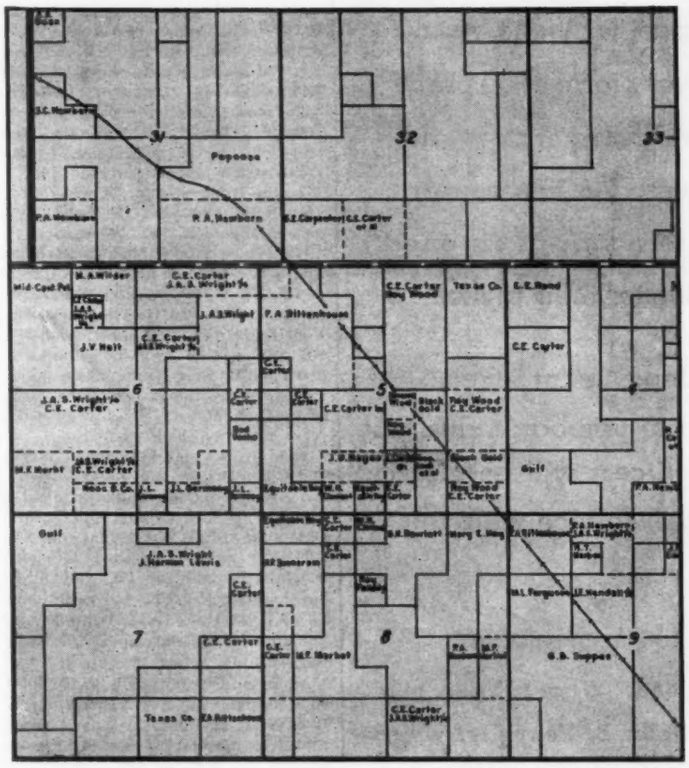
Oil producers meeting in Oklahoma City with W. J. Armstrong, chief conservation officer, recommended to the Corporation Commission that the state allowable for the July proration period be pegged at 524,875 bbls. daily for the major pools, the same allowable granted for the June period. An additional 1,300 bbls. daily was recommended for wildcat or "Class D" pools, making a total of 526,175 bbls. These figures previously had been approved by the state allocations committee at a meeting in Tulsa. The total represents a cut from the Bureau of Mines market demand estimate of 569,800 bbls.

The current week apparently will be another busy week, with a large number of wells due for completion. The Oklahoma City area again is expected to be the pace setter, more than 30 wells in the Capitol extension already being in or near the pay sand.

Oklahoma County

Twenty-one producing wells were completed in the Oklahoma City field, including two on the Stiles lease south of the University hospital; the erstwhile Harn "outlaw" well; two on state-owned land and the remainder to the north and east of the Capitol.

Two of the new producers were north of the city limits, in section 15-12-3w, at the north limits of the producing area. Fairfax Oil Corp. No. 1 Russell, NE SW SE section 15-12-3w, Block 2, Oklahoma Heights Addition, topped second Wilcox sand at 6,415 feet; total depth 6,452 feet; and made potential of 934 bbls. of oil, with 7,000,000 feet of gas, in 24 hours. Black Gold Refining Co. and others No. 1 White, NE SW SE section 15-12-3w, Lots 45 and 48, Block 2, Oklahoma Heights Addition, topped second sand at 6,396 feet; total depth 6,465 feet. It flowed 331 bbls. in six hours, making potential of 1,274 bbls. Later, it flowed at the rate of 80 bbls. an hour on gas lift, cutting 8 per cent water. Treating plant was being installed. Empire Oil & Refining Co. No. 1 Robb, SE SW NW SE section 15-12-3w, was an abandoned rig.



—Mid-Continent Map Co., Tulsa.

Charles Carter and others No. 1 Wood, section 5-4-3, Garvin County wildcat, had a showing of oil and water in saturated lime at 2,975-3,009 feet, and set casing

The following wells in section 22 were completed: Superior Oil Corp. No. 1 Francis, Block 2, Francis Capitol Addition, had Wilcox sand at 6,346 feet; total depth 6,448 feet; flowed 4,898 bbls. in six hours; made potential of 19,712 bbls. Anderson-Prichard Oil Corp. No. 1 Hare, SE NE NW NE section 22-12-3w, topped second Wilcox at 6,400 feet; total depth 6,470 feet; flowed 4,212 bbls. in six hours, making potential of 17,382 bbls. Same operators No. 1 Welch, Block 2, Hare's Lincoln Boulevard Addition, had top of second sand at 6,449 feet; total depth 6,483 feet; flowed 109 bbls. in six hours; potential, 448 bbls. British-American Oil Co. and Midway Oil Co. No. 6 McNabb, Block 14, McNabb Park Addition, flowed 4,379 bbls. in six hours; potential, 17,509 bbls.; second sand 6,377 feet; total depth 6,468 feet. Phillips Petroleum Co. and British-American Oil Co. No. 1 Bella Casa, Block 1, Bella Casa Addition, topped sand at 6,359 feet; total depth 6,523 feet; flowed 3,561 bbls. in six hours; potential 14,571 bbls. Same operators No. 2 Bella Casa, Block 2, Bella Casa Addition, flowed 3,777 bbls. in six hours, making potential of 15,337 bbls.; second Wilcox sand, 6,360 feet; total depth 6,524 feet. Phillips Petroleum Co. and Marathon Oil Co. No. 1 Dilley, Block 3, Lucile Addition, had second sand at 6,401 feet; total depth 6,521 feet; flowed 1,832 bbls. in six hours and made potential of 7,335 bbls. Phillips Petroleum Co. No. 1 Rickard, Block 6, Team's Subdivision, flowed 2,072 bbls. in six hours, making potential of 8,608 bbls.; top of second sand was 6,390 feet; total depth 6,511 feet. Phillips Petroleum Co. and Black Gold Refining Co. No. 5 Annie Sawyer, NW NE NE section 22-12-3w, topped second sand at 6,377 feet; total depth 6,459 feet; flowed 3,311 bbls. in six hours; potential 13,172 bbls. Phillips Petroleum Co. No. 1 Traub, Block 4, Lucile Addition, flowed 3,314 bbls. in six hours; potential 14,135 bbls.; topped second sand at 6,388 feet; total depth 6,521 feet. Black Gold Refining Co. No. 1 Sawyer, SE SE NW NE section 22-12-3w, had second sand at 6,391 feet; total depth 6,450 feet; flowed 3,645 bbls. in six hours, making potential of 14,373 bbls. Anderson & Kerr Drilling Co. No. 1 Park-O-Tell, Block 16, Barrow's Second Addition, made potential of 10,686 bbls., based on six-hour flow of 2,646 bbls.; top of second sand was 6,390 feet; total depth, 6,474 feet.

Estimated Production

Estimated daily average production of Oklahoma for the week ending June 27 and for the preceding week is as follows:

	Barrels	
	June 27	June 20
Allen	10,100	11,150
Asher-West Asher	725	775
Burbank	7,675	7,675
South Burbank	13,750	14,750
Balance Osage	23,400	23,500
Blackwell district	4,625	4,800
Bristow-Slick	8,425	8,350
Chandler	4,225	3,925
Crescent	7,250	5,300
Cromwell	3,575	3,700
Cushing-Shamrock	11,500	11,575
Duncan district	4,075	4,025
Edmond	11,800	11,975
Fish	9,075	8,750
Fitts	48,625	55,700
Gray	1,650	1,650
Graham	4,175	4,125
Healdton	9,200	9,225
Hewitt	4,325	4,475
Holdenville	1,050	1,050
Keokuk	7,200	6,000
Konawa	1,825	1,625
Lucien	12,750	12,800
Marshall-Lovell	1,175	1,000
Oklahoma City	137,775	126,725
Olympic	8,100	8,075
Papoose	1,025	1,050
Polo	3,300	3,250
Sasakwa and townsite	3,600	3,800
Sholem-Alechem	3,425	3,625
Seminole field:		
Bowlegs	13,475	12,950
Carr City	6,850	6,250
Earlsboro	7,400	7,350
South Earlsboro	850	825
East Earlsboro	10,825	10,775
Little River	12,875	13,525
East Little River	1,225	1,275
Maud	975	975
Mission	2,525	2,525
Seminole	11,300	10,875
East Seminole	3,925	3,700
Searight	5,450	5,275
Total Seminole	78,675	76,300
St. Louis-Pearson	25,775	25,800
Tatums	3,175	3,325
Tonkawa-Garber-Thomas	5,400	5,475
Wewoka	3,950	4,025
Yale-Jennings	3,950	4,000
Other pools	65,000	63,991
Total Oklahoma	555,325	546,350

More Capitol Wells

British-American Oil Co. No. 2 Hampton, Block 2, Hampton Place, was the only completion in section 23-12-3w. It topper second sand at 6,397 feet; total depth 6,481 feet; flowed 1,734 bbls. in six hours, and made potential of 7,412 bbls.

On the east side of the extension, Phillips Petroleum Co. No. 1 Meadors, NE NW NW section 26-12-3w, was completed. Top of Wilcox sand was 6,348 feet; total depth 6,423 feet. It

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flowed 468 bbls. in six hours, making potential of 2,040 bbls.

Sunray Oil Co. and Phillips Petroleum Co. completed two wells on state-owned land. The No. 4 State, NE NW NE section 27-12-3w, topped Wilcox sand at 6,368 feet; total depth 6,517 feet; flowed 3,248 bbls. in six hours and made potential of 13,476 bbls. The No. 5 State, NE NE NW section 27-12-3w, flowed 1,660 bbls. in six hours, making potential of 6,902 bbls. Top of second sand was 6,430 feet; total depth 6,507½ feet. No. 4 is the first well east of the Capitol; No. 5, is immediately west of the Capitol.

South of the Capitol, Sunray Oil Co. and Phillips Petroleum Co. No. 1 Harn, NE SE NW section 27-12-3w, topped second sand at 6,418 feet; total depth 6,513 feet. It flowed 942 bbls. in six hours, making potential of 3,794 bbls. of gas lift. This well was started by K. & L. Petroleum Co., which later sold its interests to the Sunray and Phillips companies.

Phillips Petroleum Co. No. 1 Stiles Community, NW NE NE section 34-12-3w, flowed 1,301 bbls. in six hours; potential 5,451 bbls. It had Wilcox sand at 6,312-6,466 feet; total depth 6,475 feet. Same operators No. 3 Stiles Community, NE NW NE section 34-12-3w, topped sand at 6,350 feet; total depth 6,524 feet. It flowed 1,438 bbls. in six hours; potential, 5,962 bbls. These wells are about four blocks north of production in the north extension of the old field.

In the Britton sector, Sinclair Prairie Oil Co. and Slick-Urschel Oil Co. No. 1 Dills, NE NE NW section 17-13-3w, flowed 1,005 bbls. in 24 hours and was completed at 6,670 feet, total depth. First Wilcox sand was topped at 6,635 feet. In the Edmond area, Continental Oil Co. No. 8 Young, NW SE NW section 31-14-3w, flowed 2,280 bbls. in four hours, made potential of 13,681 bbls., completed. Top of second Wilcox sand was 6,637 feet; total depth 6,708 feet.

New work in Oklahoma County: Big Chief Drilling Co. No. 1 Webster, SE SW SE section 27-12-3w, rigging up rotary; Slick-Urschel Oil Co. and Oklahoma Oil Co. No. 4 Suneram, NW SW NE section 6-13-3w, location; Sinclair Prairie Oil Co. and Slick-Urschel Oil Co. No. 1 Kratley, SE SE NE section 19-13-3w, old well plugging back from 6,718 feet to 6,685 feet.

Anderson-Prichard Oil Corp. No. 1 Jackson, NE NW SW NE section 22-12-3w, Lot 2, Block 1, Woody Crest Addition, Capitol extension, flowed 50 bbls. an hour at 6,475 feet while drilling in under pressure. Phillips Petroleum Co. No. 1 D. Harrell, NE SW SE section 22-12-3w, Lot 9, Block 1, Harrell Addition, flowed 150 bbls. of oil an hour while drilling in under pressure at 6,447 feet. Plaza Oil Co. No. 1 Dewey school, SE NW NE section 22-12-3w, Block 11, McNabb-Hunt Addition, was drilled in under pressure and at 6,458 feet, total depth, flowed 150 to 190 bbls. of oil an hour with drill pipe in the hole. Sunray Oil Co. No. 1 Avey, SE NW SE section 22-12-3w, flowed 250 bbls. of oil per hour at 6,440 feet, total depth, with drill pipe in the hole. British-American Oil Co. No. 1 Summitt, SE NW NW section 26-12-3w, Lot 33, Tuxedo Park Addition, was running liner after flowing 670 bbls. in 22½ hours on gas lift; total depth, 6,509 feet.

Pontotoc County

Completion data of new wells in the Fitts field of Pontotoc County follows: E. H. Moore and others No. 1-A Atkins, NW cor. section 32-2n-7, topped Wilcox sand at 4,355 feet; total depth 4,392 feet; flowed 1,755 bbls. in 2½ hours; potential 4,943 bbls. J. E. Crosbie, Inc., No. 1-B Harden, SW NE NE section 30-2-7, topped Hunton lime at 3,375 feet; total depth 3,665 feet; acidized and flowed 739 bbls. net in six hours through tubing. E. H. Moore and others No. 4-A Craddock, SW cor. section 29-2-7, top of Wilcox sand 4,395 feet; total depth 4,420 feet; flowed 2,016 bbls. in three hours; potential 4,635 bbls. Fleetborn Oil Corp. No. 7 Woolley, SE NE SE section 28-2-7, topped Viola lime at 3,588 feet; Bromide 3,860 feet; McLish 4,067 feet; total depth 4,278 feet; acidized and made potential of 3,399 bbls.

Magnolia Petroleum Co. No. 3 Woolley, NW NE NE section 28-2-7, topped Hunton lime at 3,398 feet; total depth 3,701 feet; acidized and flowed 1,021 bbls. in five hours through tubing. Same operators No. 5 Burris "B," NE SE NE section 28-2-7, acidized, flowed 942 bbls. in two hours; potential 2,998 bbls.; top of Viola 3,739 feet; Bromide 4,015 feet; McLish 4,220 feet; total depth 4,285 feet. Same operators No. 7 Metropolitan Life, SW NE NE section 27-2-7, topped Viola at 3,815 feet; Bromide 4,100 feet; total depth 4,275 feet. It was acidized, flowed 801 bbls. in two hours; potential 3,494 bbls. The No. 8 Metropolitan Life, SE cor. section 22-2-7, topped Viola at 3,945 feet; Bromide 4,215 feet; total depth 4,319 feet. After acidizing, it flowed 405 bbls. in two hours; potential 1,466 bbls. The company's No. 2 Norris, SE SW SE section 21-2-7, acidized, flowed 793 bbls. in two hours; potential 3,003 bbls. Top of Viola was 3,915 feet; Bromide 4,220 feet; total depth 4,315 feet.

Jesse Producers

Benedum & Trees No. 5 Malloy, SE SW SW section 30-5-5, in the Bebee area, was acidized, pumped 184 bbls. in 24 hours and was completed. Top of Hunton lime was 2,200 feet; total depth 2,278 feet. Continental Oil Co. No. 2 McCarty, NE SE NW section 12-1-7, in the Jesse area, topped Wilcox sand at 4,726 feet; total depth 4,745 feet, completed. It flowed 2,638 bbls. in five hours, cutting 6 per cent water, and made potential of 4,223 bbls. Same operators No. 1 Monroe, NW SW NW section 12-1-7, topped Wilcox sand at 4,734 feet; total depth 4,947 feet. It flowed 1,480 bbls. in 4½ hours while pulling drill pipe and made potential of 3,702 bbls., completed.

The following new work in Pontotoc County was reported: Akin Oil Co. No. 1 Daniels, SW NE SW section 21-2-7, location; Magnolia Petroleum Co. No. 16 Metropolitan Life, SW SE SE section 22-2-7, building rig; E. H. Moore and others No. 4 Moody, NW SE SE section 22-2-7, location; Skelly Oil Co. No. 15 Park College, SE NW NE section 28-2-7, location; Samedan Oil Co. No. 1-A Holkum, SW SW NE section 27-2-7, digging cellar; H. L. Blackstock and others No. 4-A Harden, SE SE NW section 30-2-7, rig; F. N. Campbell and others No. 1 Martin, NE NE SE section 30-5-5, rig on ground; Mary F. Oil Co. No. 3 A. White, C E half SW SE section 16-5-8, drilling at 75 feet.

Sunray Oil Co. and others No. 1

Shumard heirs, NE SW SE section 2-1n-7e, in the Jesse pool, flowed 1,250 bbls. of oil in 12 hours through casing at 4,549 feet. Continental Oil Co. No. 2 Simpson, SW SE NE section 12-1-7, total depth 4,724 feet, flowed 669 bbls. in 24 hours through casing and was to be acidized.

In the Fitts field, Continental Oil Co. No. 2 Holkum, NE NW SE section 27-2-7, was reacidized with 8,000 gallons, after making potential of 3,615 bbls. following treatment with 6,000 gallons of acid. Simpson, Feld & Westheimer No. 1 Westheimer, SE NE NE section 27-2-7, flowed 162 bbls. in one hour through tubing. Total depth was 4,265 feet.

Osage County

Carter Oil Co. and others No. 4 Eva Bean, NE SE NW section 15-25-6, South Burbank, Osage County, flowed 266 bbls. in six hours and was completed at 2,841 feet, total depth. Top of Bartlesville sand was 2,782 feet. Kewanee Oil & Gas Co. No. 5 Hale, NE NE SE section 27-26-6, topped Bartlesville sand at 2,848 feet; total depth 2,925 feet; plugged back to 2,923 feet, shot with 100 quarts and flowed 459 bbls. in 24 hours, completed.

Tide Water Oil Co. No. 5 Graves, NW SE NE section 9-24-7, flowed 207 bbls. in 24 hours after shot, completed. It topped Bartlesville sand at 2,582 feet; total depth 2,630 feet; plugged back to 2,614 feet. Same operators No. 6 Graves, NE SW NE section 9-24-7, topped Bartlesville sand at 2,585 feet; total depth 2,637 feet; was shot and flowed 322 bbls. in 20 hours, completed. The No. 4 Graves, NE SE NE section 9-24-7, topped Bartlesville sand at 2,547 feet; Burgen 2,699 feet; Mississippi 2,713 feet, total depth, and was dry and abandoned. Lewis Production Co. and Continental Oil Co. No. 12 Ah-Ka-Me, SE NE SE section 9-24-7, flowed 238 bbls. in 24 hours after a shot and was completed at 2,568 feet, total depth. Top of Bartlesville sand was 2,490 feet. Lewis Production Co. No. 5 Whitehorn, SW NW SW section 10-24-7, topped Bartlesville sand at 2,496 feet; total depth 2,566 feet; was shot, flowed 186 bbls. in 24 hours and was completed. Nadel & Lebow No. 1-A Osage, SE SE NW section 23-23-7, was dry and abandoned at 2,609 feet, total depth. Top of Bartlesville sand was 2,440 feet; Chat 2,564 feet.

The following new operations were reported in Osage County: Mid-Co Oil Corp. No. 1-A Osage, SW cor. section 17-22-10, location; Ray Branstetter No. 4 Osage, SW NE SW SE section 28-22-11, building rig; Sinclair Prairie Oil Co. No. 3 Osage, SE NE SW section 9-25-6, building rig; Sam Goodman No. 4 Osage, SE NW SE NW section 12-26-11, location; Kewanee Oil & Gas Co. No. 6 Hale, NE SE SE section 27-26-6, digging pit.

Seminole County

Completions in Seminole County were: Nathan Phillips No. 1 Cravens, SE cor. section 13-5-5; Hunton lime 2,350 feet; total depth 3,602 feet; plugged back to 2,370 feet, acidized and was shot; pumped 35 bbls. in 24 hours. W. B. Pine No. 2 Cheparney, SE SE SW section 12-5-7; Hunton lime 4,070 feet; Wilcox sand 4,418-20 feet, total depth; plugged back to 4,108 feet and was shot. It flowed 720 bbls. in 24 hours. Carter Oil Co. No. 1 Brock, C E half SE NE section 15-10-6; Misener sand 4,178 feet; Chert 4,192-93 feet, total depth; made potential of 3,395 bbls. Fleetborn Oil Corp. No. 1 Fleet, SW SW NE section 12-5-7, topped Wilcox sand at 4,200 feet; had water at 4,215 feet; plugged back to 4,210 feet, and it was dry and abandoned. Sinclair Prairie Oil Co. No. 2 Coody "B," SE NE SW section 17-9-7, had a hole full of water at 4,131 feet and was abandoned. Hilton Phillips and others No. 1 Fixico, C E half NE NE section 13-10-5, was dry and abandoned at 4,634 feet. Top of Wilcox sand was 4,623 feet. Gulf Oil Corp. and others No. 1 Scott, C W half SE NW section 11-10-6, an old well, was deepened from 4,174 feet to 4,193 feet, was acidized, made potential of 1,548 bbls. and was recompleted.

New work in Seminole County: Sinclair Prairie Oil Co. No. 2-A Mathis, SE SE NE section 12-5-7, location; same operators No. 4 Harjo, SE NW SE section 12-5-7, location; Papoose Oil Co. No. 2 Davis, SW NE NE section 12-5-7, location; W. B. Pine No. 5 Cheparney, SW SE SW section 12-5-7, moving in tools; Fleetborn Oil Corp. No. 1-A Fleet, SW SW NE section 12-5-7, rigging up rotary; Barnsdall Oil Co. No. 2-A Lustey, NW NW NE section 13-5-7, building rig; Sinclair Prairie Oil Co. No. 4 House, NE NW SE section 2-7-6, drilling at 4,297 feet, an old well deepening; Blackwell Oil & Gas Co. No. 4 Talley, SE SW SW section 14-7-6, an old well deepening, drilling at 4,245 feet: J. J. Deaner and Tilley and others No. 1 Wilson, SE SW SW section 29-7-6, set 12-inch casing at 33 feet; Champlin Refining Co. No. 2 Wolf, SW NW NW section 32-7-8, an old well, plugging back; Rudco Oil & Gas Co. No. 1-A Butner, NE NE SW section 15-9-8, drilling at 900 feet.

Amerada Petroleum Corp. and Stanolind Oil & Gas Co. No. 1 Newell, SE SE NW section 3-10-5, Stout area, Seminole County, flowed 185 bbls. of oil and 600 bbls. of water in 24 hours. Hunton lime was topped at 4,412 feet; total depth 4,434 feet.

Noble County

Phillips Petroleum Co. and Shell Petroleum Corp. No. 1-A Brumfield, NW SW SW section 22-23-2w, Billings area, Noble County, topped Arbuckle lime at 4,447 feet; total depth 4,541 feet, with water in the hole; plugged back to 4,258 feet, perforated casing and shot two times without result, and it was dry and abandoned. Shell Petroleum Corp. and Continental Oil Co. No. 1-A Murray, SE SE SW section 10-24-1w, Tonkawa pool, topped first Wilcox sand at 4,437 feet; second sand 4,480-4,511 feet, total depth, and was dry and abandoned.

Lincoln County

Stanolind Oil & Gas Co. and Amerada Petroleum Corp. No. 3 Cragg, NE NE NW section 12-14-3, the only new work in Lincoln County, had dug cellar and pits.

Hughes County

Serran No. 1 Tucker, SW SE SE section 2-9-8, Olympic area, Hughes County, topped Senora sand at 1,748 feet; total depth 1,791 feet; was shot with 65 quarts, and swabbed 80 bbls. of oil and 30 bbls. of water in 24 hours, completed. George Manahan No. 7 Oliphant "B," NW NE SE section 11-9-8, flowed 150 bbls. of oil in 24 hours after a shot in Senora sand,

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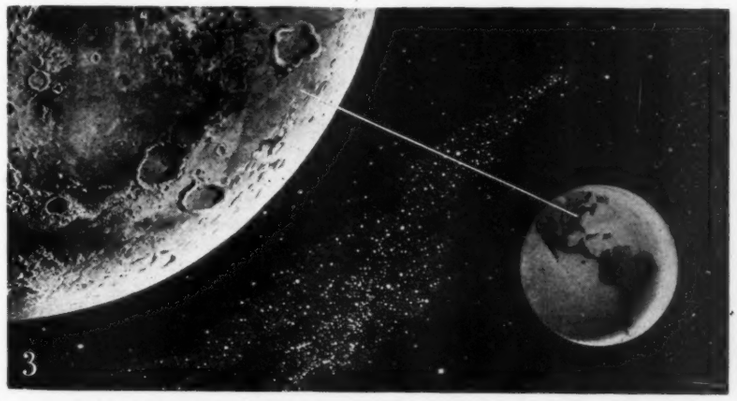

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topped at 1,754 feet, and was completed at 1,769 feet, total depth. R. C. Walker No. 1 Able, NE NE SW section 10-9-8, west of Olympic, was dry and abandoned at 1,833 feet, total depth. It produced 4,500,000 feet of gas at 1,440 feet but had a hole full of water at 1,708-28 feet.

One new test was started in Hughes County. Phillaine Oil Co. No. 3 McCaslin, NW NE NE section 11-9-8, had spudded.

Cleveland County

New work in Cleveland County was as follows: Sinclair Prairie Oil Co. No. 1 Stubbeman, NE SW NW section 34-10-2w, digging cellar; Stahl Petroleum Co. No. 1 Shulstra, SW NE NE section 17-10-2w, digging cellar.

Pottawatomie County

New work in Pottawatomie County was as follows: Amerada Petroleum Corp. and others No. 2 Vineyard, C NW NE section 15-7-8, building rig; Pure Oil Co. and others No. 1 Latimer, NE NW NW section 21-7-4, an old well plugging back from 4,125 feet to 4,116 feet, acidized and pumped 300 bbls. of oil in 24 hours.

Okfuskee County

Blackwell Oil & Gas Co. No. 1 Lamb, SW SE NW section 17-10-9, Okfuskee County, was dry and abandoned at 1,829 feet. Champlin Refining Co. No. 1 Thompson, SW SW NW section 7-13-8, wildcat southwest of Micawber, was abandoned at 1,147 feet, following a fishing job.

One new operation was reported in Okfuskee County. Champlin Refining Co. No. 1-A Thompson, SW SW NW section 7-13-8, drilling at 510 feet.

Kay County

Shell Petroleum Corp. No. 3 Biddle, SE SE NE SW section 5-28-1w, Kay County, is being deepened to Layton sand, and was drilling at 2,398 feet with rotary. Old total depth was 2,396 feet.

Payne County

Denver Producing & Refining Co. and others No. 1 Pratt, NW cor. section 20-18-3, wildcat south of Stillwater in Payne County, encountered water and was dry and abandoned at 4,165 feet, total depth. In had Bartlesville sand at 4,095-4,169 feet.

Creek County

The only well completed in Creek County was Sinclair Prairie Oil Co. No. 30 Litchfield, NE SE NE section 21-17-7e. It pumped at the rate of 4 bbls. of oil daily after getting Simpson sand at 2,870-75 feet, drilling to 2,902 feet, and plugging back to 2,877 feet.

New work in Creek County follows: Grieves and others No. 1 Meyers, NW cor. section 18-19-8, building rig; Sinclair Prairie Oil Co. No. 38 Litchfield, SW SW NW section 22-17-7, an old well being deepened, drilling at 2,804 feet; Acid Oil Co. No. 2 Deere, CNL SE NW section 7-17-7, rigging up; McBride, Inc., No. 2 Fears, NW SW NE section 3-15-7, drilling at 420 feet; Helvie-Stout No. 4-A Land, C SE SE section 2-18-11, drilling below 700 feet.

Okmulgee County

Completions in Okmulgee County: Wilcox No. 1 Bockler, NW SW NE section 22-13-12, had sand at 2,184-92 feet, total depth, plugged back to 1,570 feet and produced 700,000 feet of gas; Fleck Drilling Co. No. 1-A Adams, NE SW SW section 12-14-14, abandoned at 1,404 feet; Burns No. 1-B Ashley, NW NE NE section 30-14-14, Booch sand at 1,255-71 feet, total depth 1,276 feet, pumped 10 bbls. of oil in 24 hours; W. B. Pine No. 1 Bruner, SE NE NE section 4-15-14, abandoned in Wilcox sand at 2,210-15 feet; Adkins No. 1-A Clayton, CEL NE section 36-16-11, total depth 1,759 feet, pumped 15 bbls. of oil in 24 hours.

The following new work was reported in Okmulgee County: Klingensmith No. 11-A Farr, N half SW NW section 36-16-11, drilling at 300 feet; Alrose Supply Co. No. 5 Thompson & Marshall, NW NE SE section 4-15-11, rigging up; Reneau-Black and others No. 3 well, NW SE NW section 16-14-10, drilling around 200 feet.

Tulsa County

Johnson Oil Refining Co. No. 2 Stebbins, SE SW SE section 30-19-10, was the only one of three Tulsa County completions to find oil. It had Red Fork sand at 2,241-72 feet, total depth 2,279 feet, and pumped 16 bbls. of oil in 24 hours. Suppes No. 2 Drew, NE NE SW section 34-19-12, was abandoned at 1,336 feet. Childs No. 2-A McKee, CWL NE NE section 17-19-10, was abandoned in Bartlesville sand at 2,055-80 feet.

New Tulsa County operations: Johnson Oil Refining Co. No. 2 Anthis, NW SE SE section 30-19-10, rigging up machine; Mechlin No. 3 Luster, SE NW NE section 14-19-13, spudded.

Muskogee County

Three failures were reported in Muskogee County. Morrison No. 2-A Reed, CNL NW SW section 18-14-16, was abandoned at 1,780 feet, after getting Dutcher sand at 1,756-66 feet: Foltz No. 4 McIntosh, CWL NW SE section 17-14-17, abandoned in Wilcox sand at 2,232-52 feet; Rose No. 4 Jefferson, C NW NW section 33-15-15, abandoned in sand at 1,777-89 feet.

The only new Muskogee County test was Folk No. 3 McIntosh, CEL NW SE section 17-14-17, a machine.

McIntosh County

Indian Territory Illuminating Oil Co. No. 1 Tancred, SW NW SE section 9-9-14, wildcat in southwestern McIntosh County, was completed as a gas well at plugged back depth of 2,731 feet. It topped Wilcox sand at 4,525 feet and drilled to 4,536 feet, where water was found, before plugging back. Gas production of 1,000,000 feet was from Gilcrease sand at 2,695-2,732 feet.

Garvin County

C. A. Luttrell and others No. 1 Howell, NW SE NW section 34-1-1, wildcat in southern Garvin County, was drilling at 70 feet. Winkler & McQueen No. 1 Davis, SE cor. section 32-1-3w, in the Tussy area, was a location.

Carter County

Shell Petroleum Corp. No. 41 McClure, SE SE SW section 5-4s-3w, in the Healdton area of Carter County, pumped 54 bbls. of oil and 15 bbls. of water and was completed in sand at 975-1,015 feet, total depth. Twin State Oil Co. No. 3 Cochneur, NE SE SE NW section 8-4s-3w, an old well, was deepened from 1,005 feet to 1,071 feet, pumped 12 bbls. of oil and was recompleted. Magnolia Petroleum Co. No. 15 Richard, SW NE NE section 6-4s-3w, an old well, was deepened from 946 feet to 1,162 feet, pumped 12 bbls. of oil and 3 bbls. of water and was recompleted.

Love County

W. H. Riddle and others No. 1 Johnson, C SW SE section 20-8s-2w, was the location for a 3,500-foot test in Love County.

Marshall County

Levelle Coal Co. No. 6 Brint, NE NW SE section 1-8s-5, Marshall County, pumped 32 bbls. of oil and 8 bbls. of water in 24 hours and was completed at 535 feet, total depth. Kingston Oil & Gas Co. No. 4 Felts, NW NE NW section 6-8s-6, an old well, pumped 35 bbls. of oil and 5 bbls. of water after deepening from 270 feet to 555 feet and was recompleted. G. L. Priest No. 9 Cope-Sublett, SE SE SW NE section 1-8s-5, had sand at 570-85 feet and was abandoned at 589 feet, total depth.

Sherril & Rounds No. 1 Taylor, SW SW NE NE section 30-7s-7, wildcat in southeastern Marshall County, was a machine.

Stephens County

L. A. Wilkins and others No. 10 Crump, NE SW SE section 10-2s-5w, in Stephens County, had sand at 792-801 feet, total depth, pumped 8 bbls. in 24 hours and was completed. Raizen Brothers No. 8 Crosbie, SE SW SW section 23-1s-5w, pumped 4 bbls. of oil in 24 hours from sand at 670-82 feet, total depth 683 feet, and was completed. Same operators No. 9 Crosbie, SE SE SW SW section 23-1s-5w, had sand at 402-417 feet, total depth, pumped 2 bbls. of oil in 24 hours, completed. Winkler & McQueen No. 1-C Bristow, SE NW NW section 18-2s-7w, was dry and abandoned at 2,250 feet, total depth.

New work in Stephens County: Skelly Oil Co. No. 7 Martin, SW SE NW section 36-1s-5w, drilling at 410 feet; Westheimer & Daube No. 3 Lewis, NW SW SE SE section 4-2s-5w, waiting on cement at 683 feet; George Pace and others No. 7 Payne, SW NE NW section 28-2s-7w, drilling at 800 feet; Mudge Oil Co. No. 8 Anderson, SE SE SW SW section 10-3s-5w, waiting on cement at 1,496 feet; Ed Parson No. 1 H. B. Olson, C SW SW section 21-2n-8w, location for wildcat in northwestern Stephens County.

Jackson County

Gulf Oil Corp. No. 2 Shirley, SE NW NE section 6-1s-19w, in the Tipton area of Jackson County, flowed 1,468 bbls. of 40-gravity oil in 24 hours, was prorated to 100 bbls. daily and completed in Granite Wash and lime at 2,571-2,605 feet, total depth. Same operators No. 1 McDaniel, SW SE NE section 3-1-20w, swabbed 90 bbls. in 24 hours and was completed in Granite Wash at 1,471-1,529 feet, total depth. Same operators No. 8 Kelly, NW SE NE section 10-1-20w, had Granite Wash at 1,470 feet, total depth 1,510 feet in shale, pumped 25 bbls. in 24 hours and was completed. C. R. Conyer No. 1-A Cobb, NE NW NE section 22-1-20w, had sand at 1,127-37 feet, total depth, pumped 17 bbls. in 24 hours and was completed.

Southwestern Oklahoma

John Hooser No. 1 Sonomaker, SE SW SW section 24-7-21w, in Kiowa County, lost string of tools and was abandoned at 987 feet, total depth.

Farlyn Oil Co. No. 32 Seay, NE SW SE section 3-7s-5w, in Jefferson County, pumped 20 bbls. in 24 hours from sand at 1,256-66 feet and was completed at 1,276 feet, total depth.

Magnolia Petroleum Co. No. 5 Madrano, SE NW SW section 36-6-10w, was a location for a test in the Cement field, Caddo County.

Carter Oil Co. No. 1 Carter-Kerns, SW NE SE section 21-3-5w, in Grady County, was preparing to deepen from 1,690 feet.

Farlyn Oil Co. No. 33 Seay, SE NE SW SE section 3-7s-5w, in Jefferson County, was drilling at 49 feet. Long, Yingling & Lauck No. 11 Seay, SE SW NE section 3-7s-5w, an old well being deepened, was drilling in shale at 1,519 feet.

Michigan Fields

(Continued from Page 54)

a proposed Taymouth Township, Saginaw County, wildcat.

Wildcat Shows

A new showing of gas, flowing at about 500,000 feet from the Sylvania, will be tested by Mott & Denman, independent operators, in their No. 1 Huffman, NE SE NE section 26-6s-3e, Adrian Township, Lenawee County, near the southeastern corner of the lower peninsula. The show was encountered at about 1,250 feet.

Socony-Vacuum Oil Co. finally cleaned up a bad casing job and placed its No. 1 McCarberry, section 36-5s-5e, Macomb Township, same county, on the pump as a 15-bbl. producer.

Two other wildcats being closely watched this week for possibilities of new oil fields are Fortney Oil Co. No. 1 Neville, SE SE NW section 19-17n-3w, Sheridan Township, Clare County, drilling below 3,200 feet and near Dundee, and Jetter Oil Co. No. 1 DeHart, NE SW NE section 1-9n-6w, Bushnell Township, Montcalm County, nearing the top of the Dundee at 3,150 feet.

New Locations

Nineteen new state permits to drill were issued during the past week, including four wildcats, as follows: National Minerals Corp. No. 1 B. B. Smith, NW NW SE section 9-4n-1w, Meridian Township, Ingham County, near Lansing; Socony-Vacuum Oil Co. No. 1 C. J. Downing estate, NE NE SW section 36-6s-5e, Ridgeway Township, Lenawee County; Rodgers & Anderson No. 1 Henry and Stella Ross, SE NE NE section 23, same township, and Muskegon Development Co. No. 1 B. Doll, SW NE SE section 8-9n-14w, Ravenna Township, Muskegon County, already driving pipe.

The rest included tests in New Haven-Gratiot for gas; Geneva-Midland for oil; three in Porter-Midland for oil; four in Belvidere-Montcalm for gas; one in Crystal-Montcalm for oil; three in Ogemaw Township and county for oil, and two in West Branch Township, same county, for oil.

Permits issued to date are running about 75 greater than last year for the first six months. The 1935 total was 700, while the January 1 to June 30 total this year may reach 400.

H. E. Bell has made location for a wildcat test on the Nelson lease in section 16, Coe Township, Isabella County, near Shepherd.

F. W. Floyd, general superintendent, Carter Oil Company, is now on vacation in White Sulphur Springs, W. Va., and other points east.

Rocky Mountain Area

By
T. R. INGRAM

ELEVEN NEW OIL WELLS IN LEA; OTHER AREAS SUBSIDE

DENVER, Colo., June 29.—Colorado has three new operations getting under way, of which one is another test in the old Greasewood pool in Weld County by the Continental Oil Co., and the other two are in the new Price pool in Archuleta County. There were no completions in Colorado.

The Montana-Wyoming Oil Co.'s big gas well in the Big Horn Basin, Wyoming, which has been blowing wild since last January and on fire since March, is being brought under control after extinguishing the fire. Leslie McKay was overcome with gas and died. A second mystery well in Lance Creek is the Continental Oil Co. No. 2 Apex-3, which is 1¼ miles northeast of the nearest Sundance producer.

Cobb & Pardee No. 1 Stuft, nearly 2 miles north of production in the Cut Bank field, was a failure in the Cut Bank sand, but will be completed as a gasser in the Moulton. Three inside wells were completed as oil wells and two new operations are getting under way. The Kevin-Sunburst field has three completions and three new operations.

NEW MEXICO

The largest producer completed in New Mexico during the week was the Amerada Petroleum Corp. No. 1 State "T," C SE SW section 25-19-36, in the Monument pool, Lea County. After acidizing, it flowed 2,664 bbls. of oil through tubing in 24 hours. Oil pay was found at 3,822 to 3,939 feet, total depth. First show of oil and gas was at 3,182 feet. Ohio Oil Co. No. 3 State-Elliott, SW SW SE section 30-19-37, was treated with 3,000 gallons of acid and flowed 2,160 bbls. of oil through 1-inch tubing choke in 24 hours, completed. It had shows at 3,460-70 feet, 3,730-40 feet, 3,815-25 feet, with the pay at 3,815 to 3,935 feet, total depth. Gas gauged 2,000,000 feet. Continental Oil Co. No. 2-A-6 Britt, C NW SW section 6-20-37, had pay at 3,880 to 3,895 feet, total depth, and flowed 1,104 bbls. of oil naturally through three-quarters inch tubing choke in 24 hours. Gas measured 1,370,000 feet. At 3,850 feet it produced 36,000,000 feet of dry gas. Fred Turner, Jr., No. 1 State "A," NE NW SW section 2-20-36, flowed 1,392 bbls. of oil naturally through tubing, with 1,000,000 feet of gas, and was completed. Oil pay was had at 3,788 to 3,898 feet, total depth.

Pipe line runs from Lea County pools in May were as follows:

Hobbs	$24,406
Cooper	268,543
Eunice	644,903
Jal	96,493
Lea	30,084
North Lea	1,499
Monument	311,305
Total	2,177,233

The allocation for the New Mexico fields for the last half of June was 73,000 bbls. daily, the same as on June 1. The only changes were the reduction in the top allowance for nonmarginal wells from 100 bbls. per day to 97 bbls. and reduction of the Artesia field allocation from 3,450 to 3,230 bbls. daily.

Umpire C. G. Staley has put into effect for New Mexico Conservation Commission a proration schedule for the Artesia-Maljamar-Grayburg-Jackson pools in Eddy County. The allocation for the Artesia-Maljamar area is 3,230 bbls. daily. All nonmarginal units in the area are given a flat daily unit allowable of 25 bbls. each, provided the well thereon has a depth of 2,500 feet or less. The flat allowable for units having a well of greater depth than 2,500 feet is 1 bbl. for each 100 feet of depth. Nonmarginal units are also given a potential allowable above the flat unit allowable. The total potential allowable is the total allowable for the area less the sum of the total marginal allowable and the total flat unit allowable. The schedule for the last half of June shows 211 wells under proration in the area. The potential is 9,145 bbls. daily. The allowable for marginal units is 1,927 bbls. and for the nonmarginal units 1,303 bbls. daily.

In the Eunice area, Humble Oil & Refining Co. No. 1 State-Aggies, C SE SW section 31-20-37, had oil pay at 3,762 to 3,850 feet, total depth, completed. After acidizing, it flowed 696 bbls. of oil through three-quarters inch tubing choke in 24 hours. Gas gauged 225,000 feet. Devonian Oil Co. No. 4 State-Heasley, C SW SW section 5-21-36, flowed 192 bbls. of oil through tubing in 24 hours after acidizing and produced 93,576 feet of gas. It was completed at 3,875 feet, total depth, in pay topped at 3,785 feet. Gulf Oil Corp. No. 7 Arnott-Ramsey "C," C NW NE section 21-21-36, flowed 660 bbls. of oil naturally through tubing and was completed in pay at 3,820 to 3,914 feet, total depth. Gas measured 994,561 feet. Same operator's No. 2 Janda "B," C NE SE section 32-21-36, was dry and abandoned at 3,880 feet, total depth.

Shell Petroleum Corp. No. 1 State "E," C E half SE SE section 14-18-37, in the Hobbs field, was dry and abandoned at 4,374 feet, total depth. It had shows of oil, but encountered sulfur water at 4,374 feet and plugged back to 4,178 feet. Acid treatment failed to make a commercial producer.

Gulf Oil Corp. No. 1 E. King, C SW NW section 28-21-37, in the Hardy area, was acidized and flowed 152 bbls. of oil through tubing, with 994,000 feet of gas, in 24 hours. In the Jal sand area, Sun Oil Co. No. 1 Stuart, C NW NE section 15-25-37, was completed in oil pay at 3,362- to 3,390 feet, total depth. It was shot with 200 quarts at 3,279 to 3,380 feet and flowed 883 bbls. of oil through 1-inch casing choke in 24 hours. Humble Oil & Refining Co. No. 1 Lanehart, C NE SW section 21-25-37, was shot with 200 quarts at 3,305 to 3,435 feet and flowed 72 bbls. of oil through casing in 24 hours. It had pay at 3,359 to 3,565 feet, total depth.

The only completion in Eddy County was Dexter & Berry No. 1 Berry, NW NE NW section 21-17-30, in the Jackson area. It flowed 505 bbls. of oil naturally through casing from pay at 3,167 to 3,170 feet, total depth.

Eunice Area

Gulf Oil Corp. No. 8 Bell-Ramsey-State, C NW NW sec. 4-21-36. T.D. 3,890 ft.; testing.

Empire G. & F. Co. No. 1 State "D," C SE NE sec. 32-21-36, ⅝ mi. N part of No. 157 lse. T.D. 3,941 ft.; acidized; waiting.

General Crude Oil Co. No. 2 State "E," C NE SW sec. 32-21-36. T.D. 3,967 ft.; acidized; swabbed 25 bbls. in 8 hrs.; reacidized.

Shell Pet. Corp. No. 1 State "J," C SE SW sec. 32-20-37. T.D. 3,845 ft.; acidized; flwd. 32 bbls. in 7 hrs.; set packer at 3,765 ft.; reacidized; 74 bbls. in 18 hrs.

Gulf Oil Corp. No. 9 Bell-Ramsey, C SW SW sec. 4-21-36. T.D. 3,870 ft.; testing.

Gulf Oil Corp. No. 4 Orcutt, C SE NE sec. 6-21-36. T.D. 3,902 ft.; preparing to acidize.

Continental Oil Co. No. 6-A-18 Meyer, C NW NE sec. 18-21-36. Drlg. 6,836 ft.

Continental Oil Co. No. 11-B-4 Meyer, C SE SE sec. 4-21-36. Cellar and pits.

Samedan Oil Co. No. 1 Marshall, C SW NW sec. 12-21-36. T.D. 3,861 ft.; swabbed 30 bbls. per hour; to test.

Continental Oil Co. No. 5-A-18 Lockhart, SE SE SW sec. 18-21-36. Drlg. 3,412 ft.

Texas Co. No. 2 State Aggies, C SW SE sec. 31-20-37. T.D. 3,730 ft.; set 7-in csg.

Continental Oil Co. No. 12-B-4 Meyer, C SE SW sec. 4-21-36. T.D. 3,775 ft.; set 5½-in. csg.

Devonian Oil Co. No. 5 State-Heasley, C NW SW sec. 5-21-36. Cellar and pits.

Devonian Oil Co. No. 6 State-Heasley, C NE SW sec. 5-21-36. Loc.

Humble O. & R. Co. No. 2 Knox, C SW SE sec. 10-21-36. Drlg. 3,732 ft.

Gulf Oil Corp. No. 2 Collins, C NE NW sec. 14-21-36. Rigging up rotary.

Humble O. & R. Co. No. 2 State-Aggies, C SW SW sec. 31-20-37. Cellar.

Gulf Oil Corp. No. 10 Bell-Ramsey-State, C NW SW sec. 4-21-36. Drlg. 880 ft.

Atlantic Oil Prod. Co. No. 2 State "K," C NE SW sec. 6-21-36. Drlg. 3,368 ft.

Gulf Oil Corp. No. 3 Houston, C SW SE sec. 7-21-36. Rig.

Gulf Oil Corp. No. 1 H. L. Houston, C SE SW sec. 7-21-36. Rig.

Humble O. & R. Co. No. 6 Adkins, C NW NW sec. 10-21-36. T.D. 282 ft.; set 10¾-in. csg.

Atlantic Oil Prod. Co. No. 1 State "L," C SW NW sec. 11-21-36. Drlg. 2,440 ft.

Mid-Continent Pet. Corp. No. 1 Marshall, SW SE SE sec. 11-21-36. T.D. 1,458 ft.; set 9⅝-in. csg.

Gulf Oil Corp. No. 3 Collins, C SW NE sec. 14-21-36. Rig.

Gulf Oil Corp. No. 3 Bell-State "C," C NE NW sec. 15-21-36. Rig.

Gulf Oil Corp. No. 2 Janda "C," C SW SW sec. 15-21-36. Drlg. 1,700 ft.

Gulf Oil Corp. No. 8 Arnott-Ramsey "C," C SW SE sec. 21-21-36. Moving in material.

Skelly Oil Co. and Humble O. & R. Co. No. 1 Adkins, C NE NW sec. 10-21-36. Rig.

Continental Oil Co. No. 2-B-14 Lockhart, C NW NW sec. 14-21-36. Rig.

Continental Oil Co. No. 1-D-15 State, C SE NE sec. 15-21-36. T.D. 2,660 ft.; set 7⅝-in. csg.

Gulf Oil Corp. No. 5 Orcutt, C NW NW sec. 5-21-36. Cellar and pits.

Shell Pet. Corp. No. 2 State "E," C NW NE sec. 6-21-36. Cellar and pits.

Atlantic Oil Prod. Co. and Tide Water Oil Co. No. 1 H. L. Houston, NE NW NW sec. 7-21-36. Cellar and pits.

Gulf Oil Corp. No. 9 Arnott-Ramsey "C," C NE NE sec. 21-21-36. Cellar; pits.

Atlantic Oil Prod. Co. No. 2 State "L," C SE NW sec. 22-21-36. Cellar and pits.

Landreth Prod. Co. No. 1 State "D," C NW NW sec. 22-21-36. Cellar and pits.

Continental Oil Co. No. 2-D-15 State, C NW NE sec. 15-21-36. Rig up.

Monument Area

Gulf Oil Corp. No. 1 A. B. Reeves, C NW SW sec. 29-20-37. Wildcat; T.D. 3,859 ft.; flowed 77 bbls. oil in 24 hrs.; testing.

Sun Oil Co. No. 6 Weir, C NW NE sec. 25-19-36. T.D. 3,841 ft.; set 7-in. csg.

Anderson-Prichard Oil Corp. No. 2 Britt, SE SW NE sec. 7-20-37. Drlg. 2,792 ft.

Continental Oil Co. No. 4 State "C," C SW NW sec. 30-19-37. Drlg. 3,552 ft.

Amerada Pet. Corp. No. 3 Phillips, C SW NE sec. 1-20-36. Drlg. 3,151 ft.

Amerada Pet. Corp. No. 3 State "D," C SE NW sec. 1-20-36. Drlg. 3,748 ft.

Anderson-Prichard Oil Corp. No. 2 Britt "A," C NE SW sec. 6-20-37. Loc.

Skelly Oil Co. No. 1 State "E," C SE NE sec. 29-19-37. Drlg. 3,297 ft.

Continental Oil Co. No. 2-A-3 Reed, C SE NE sec. 3-20-36. Drlg. 3,930 ft.

Texas Co. No. 1 State "K," C SE SE sec. 18-19-37. Drlg. 3,895 ft.

Amerada Pet. Corp. No. 2 State "K," C NE NW sec. 29-19-37. Drlg. 3,760 ft.

Amerada Pet. Corp. No. 1 Sarah Phillips, SE SE SW sec. 33-19-37. Drlg. 3,545 ft.

Gulf Oil Corp. No. 2 Mathews, C NW SE sec. 6-20-37. T.D. 3,740 ft.; set 5½-in. csg.

Oilwell Drlg. Co. No. 2 State "A," C NW NE sec. 29-19-37. T.D. 3,960 ft.; set 7-in. csg.

Ohio Oil Co. No. 4 State-Elliott, C SE SE sec. 30-19-37. T.D. 3,790 ft.; set 7-in. csg.

Anderson-Prichard Oil Corp. No. 4 Britt, C NW NE sec. 7-20-37. Drlg. 3,005 ft.

Amerada Pet. Corp. No. 5 Weir, C SW NW sec. 35-19-36. Drlg. 3,445 ft.

Amerada Pet. Corp. No. 2 Lambert, C SW NE sec. 6-20-37. Drlg. 3,092 ft.

Gulf Oil Corp. No. 1 Ketter, C SW SE sec. 20-19-37. Rig.

Tide Water Oil Co. No. 2 State "F," C NE NW sec. 20-19-37. Drlg. 2,585 ft.

Amerada Pet. Corp. No. 2 State "P," C SW SW sec. 29-19-37. Drlg. 3,224 ft.

Empire O. & R. Co. No. 4 State "E," SW cor. sec. 30-19-37. T.D. 2,481 ft.; set 9⅝-in. csg.

Gulf Oil Corp. No. 1 Culp "B," NW NW SE sec. 31-19-37. Rig.

Gulf Oil Corp. No. 1 Phillips, NW NW NE sec. 31-19-37. T.D. 1,250 ft.; set 7⅝-in. csg.

Tide Water Oil Co. No. 1 State "H," C NW SW sec. 32-19-37. Drlg. 2,897 ft.

Shell Pet. Corp. No. 1 Cooper, NW NW NE sec. 5-20-37. Drlg. 3,208 ft.

Texas Co. No. 3 State-Aggies, NE cor. sec. 20-20-37. Drlg. 1,175 ft.

Gulf Oil Corp. No. 5 Graham-State "C," C NW NE sec. 25-19-36. Rig.

Amerada Pet. Corp. No. 2 State "S," C SW SW sec. 2-20-36. T.D. 230 ft.; set 12½-in. csg.

Continental Oil Co. No. 1-A-17 State, C SW SW sec. 17-19-37. Drlg. 1,480 ft. in lime.

Shell Pet. Corp. No. 1 State "F," C NE SE sec. 29-19-37. Drlg. at 2,471 ft.

Amerada Pet. Corp. No. 1 Phillips "A," SW SW NE sec. 31-19-37. Rig.

Amerada Pet. Corp. No. 1 State "U," C SW NW sec. 32-19-37. Cellar.

Amerada Pet. Corp. No. 1 Gaither, C NE SE sec. 34-19-36. Drlg. 2,515 ft.

Sun Oil Co. No. 2 State, C SE NE sec. 25-19-36. Cellar and pits.

Ohio Oil Co. No. 1 Barber, C SW SW sec. 32-19-37. Cellar.

Shell Pet. Corp. No. 1 State "G," SW cor. sec. 16-20-37. Loc.

Skelly Oil Co. No. 1 State "F," SE cor. sec. 17-20-37. Loc.

Shell Pet. Corp. No. 3 State "B," C NE NW sec. 36-19-36. Rig.

Lea County—Miscellaneous

Texas Co. and Repollo Oil Co. No. 1 Lanehart, C NE sec. 29-25-37. T.D. 3,165 ft.; flowed 16 B.P.H., 35 per cent wtr.

Landreth Prod. Co. No. 1 J. W. Grizzell, C SE SW sec. 5-22-37. Drlg. 3,510 ft.; est. 1,500,000 ft. gas.

Rowan et al No. 1 Mattern, C SW SE sec. 7-22-37. T.D. 3,727 ft.; testing.

C. & G. Oil Co. No. 1 E. Weir, C NE NE sec. 14-20-37. Wildcat; T.D. 3,980 ft.; set packer at 3,772 ft.

Gulf Oil Corp. No. 1 W. T. McCommack, C NE NE sec. 32-21-37. T.D. 3,802 ft.; acidized; flowed 114 bbls. in 24 hrs.; swbg. through tbg.

Continental Oil Co. No. 1 J. C. Farney, C SW SE sec. 5-23-36. Wildcat. Loc.

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Gulf Oil Corp. No. 1 S. J. Carr, C NW SW sec. 3-24-37. Drlg. 3,800 ft.

Gulf Oil Corp. No. 2 N. F. Humphreys, C NE NW sec. 25-25-36. Drlg. 3,350 ft.

Continental Oil Co. No. 2-A-19 Eaves, C SW SW sec. 19-26-37. Drlg. 3,150 ft.

Gulf Oil Corp. No. 1 J. A. Stuart, C SW NE sec. 10-25-37. T.D. 3,431 ft.; taking drill stem test.

Gulf Oil Corp. No. 1 L. M. Buffington, C NW SW sec. 13-25-37. T.D. 3,063 ft.; est. 15,000,000 ft. gas; S.D.

Sun Oil Co. No. 1 Lanehart, C SE SE sec. 20-25-37. T.D. 2,757 ft.; 22,100,000 ft. gas; killed gas; set tbg.; stuck; fsg.

Magnolia Pet. Co. No. 1 E. O. Carson, C NW SW sec. 28-21-37. Drlg. 3,500 ft.

Skelly Oil Co. No. 1 Stuart, C NE NW sec. 15-25-37. Drlg. 2,800 ft.

Texas Co. No. 1 Eula Alexander, C NW SW sec. 7-21-37. T.D. 3,835 ft.; acidized; flowed 31 bbls. fluid in 24 hrs.; gas est. 2,000,000 ft.

Byrd-Frost, Inc. No. 1-A-1 Wells, C NW SW sec. 1-25-36. Drlg. 3,410 ft.

Williams & Cockburn No. 3 Miller, C SW SW sec. 23-17-32. T.D. 445 ft.; drlg. by tools.

Texas Co. No. 1 E. Fanning, C SE NE sec. 4-24-37. T.D. 1,308 ft.; set 8⅝-in. csg.

Jal Natural Gas Co. No. 1 Bates, C NW SW sec. 20-25-37. Drlg. 65 ft.

Harry Leonard No. 2 Lanehart, C SE NW sec. 21-25-37. Drlg. 1,045 ft.

Culberson & Irwin No. 1 Eaves, C SW NW sec. 18-21-33. Drlg. 900 ft.

Humble O. & R. Co. No. 1 B. E. Boyd, C NW SE sec. 35-22-37. Drlg. 120 ft.

Argo Royalty Co. No. 1 Lanehart, SW SE NE sec. 21-25-37. Cellar and pits.

Hobbs Area

National Securities Oil Corp. No. 1 Linam, NE SE SW sec. 33-18-37; wildcat. Old well P.B. from 4,238 to 4,228 ft.; swbd. sulfur wtr.; no oil; S.D. for orders.

Cooper Area

Plains Prod. Co. No. 1 R. L. Mosley, C NW SE sec. 34-24-37. T.D. 3,551 ft.; flowed 117 bbls. in 24 hrs. while cleaning out.

Southern Oil Corp. No. 1 Vaughan, C SW SE sec. 15-24-36. Drlg. 3,556 ft.

Southern Oil Corp. No. 1 Gates, C SW NW sec. 23-24-36. T.D. 3,497 ft.; flowed 82 bbls. oil in 24 hrs., 200 bbls. water per hour; to plug back.

Skelly Oil Co. No. 5 Coates, C NE SE sec. 3-24-36. T.D. 3,500 ft.; set 7-in. csg.

Sims Area

Samedan Oil Co. No. 1 Parks, 330 ft. from S and 400 ft. from W lines, SW¼, sec. 14-22-37. T.D. 3,703 ft.; plugged back 3,620 ft.; to set 5½-in. csg., with packer.

Skelly Oil Co. No. 1 Ella Simms, C NW SE sec. 3-23-27. T.D. 3,375 ft.; set 7-in. csg.

Penrose & Rowman No. 2 Cary, C NE SW sec. 22-23-37. T.D. 3,570 ft.; swabbed 92 bbls. oil; testing on gas lift.

Sun Oil Co. No. 1 Richards, C NE SE sec. 6-23-37. T.D. 3,798 ft.; testing.

Humble Oil & Ref. Co. No. 1 W. B. Farrell, C SW SE sec. 22-22-37. T.D. 3,705 ft.; to plug back.

Tide Water Oil Co. No .1 A. Waldon, C SE NE sec. 21-22-37. T.D. 3,575 ft.; 100 ft. oil in hole.

Magnolia Pet. Co. No. 1 Cary, C NE SE sec. 21-22-37. Drlg. 2,495 ft.

Penrose & Rowan No. 3 Cary, C SE NW sec. 22-22-37. T.D. 1,305 ft.; waiting on tools.

Continental Oil Co. No. 1-A-15 Elliott, SE SE SE sec. 15-22-37. Location.

Continental Oil Co. No. 1-A-21 Elliott, C SE SE sec. 21-22-37. Location.

Skelly Oil Co. No. 2 J.V. Baker, C NW NW sec. 27-22-37. Drlg. 2,783 ft.

Gulf Oil Corp. No. 1 F. C. King, C SW NW sec. 5-23-37. T.D. 3,060 ft.; set 9⅝-in. csg.

Penrose & Rowan No. 4 Cary, C SW NW sec. 22-22-37. T.D. 1,146 ft.; set 8⅝-in. csg.

Samedan Oil Co. No. 1 Hughes, C NE SW sec. 4-23-37. Location.

Eddy County

Etz. Bros. No. 2 State, C NW SW NE sec. 16-17-30. Drlg. 3,110 ft.

Tignor, Etz & Keys No. 4 Keys "A," C SW SE sec. 10-17-28. Drlg. 635 ft.

Grayburg Oil Co. No. 7 Burch, C NW NE sec. 19-17-30. T.D. 475 ft.; set 8¼-in. csg.

Red Lakes Oil Co. No. 7 State, NW NW SE sec. 22-17-28. Drlg. 1,385 ft.

Carper et al No. 1 Gissler "B," NW NE NW sec. 23-17-30. M.I.M.

Hammond et al No. 1 State, SW SE SW sec. 15-17-28. Rigging up machine.

Pecos Valley Gas Co. No. 1 Andrews-State, C SW SW sec. 2-17-28. Drlg. at 340 ft.

Harding County

Kahay No. 1 Dae Daca, C sec. 19-20n-31e. T.D. 1,511 ft.; setting 5 3/16-in. csg.

Clyde B. Neill No. 1 Foster, C NW SW sec. 27-21-30. Drlg. 700 ft.

De Bacca County

Mid-Continent Engineering Corp. No. 1 State, C NW SE sec. 27-4n-22e. T.D. 735 ft.; U.R. 10-in. csg.

Chaves County

Comanche Drlg. Co. No. 2 Sloop & Purcell, C NE NE sec. 15-11-26. Drlg. 1,105 ft.

NORTHWEST NEW MEXICO

Bernalillo County

Norine Realty Co., Inc., No. 2 Gallegas grant, SE NW NW sec. 19-11n-4e. Drlg. 1,700 ft.

Guadalupe County

Anton Chico Dev. Co. No. 2 fee, NW NE SW sec. 20-9n-17e. T.D. 804 ft.; fsg. tools.

Ralph Knight et al No. 1 Anton Chico, SW sec. 33-9n-16e. Spd. and S.D.

McKinley County

Al Gibbons No. 1 fee, SW SW SW sec. 22-20n-9w. T.D. 500 ft.; fshg.

S. Dysart et al No. 1 Bouton, CEL NW NE sec. 14-14n-10w. T.D. 1,490 ft.; rmg. at 775 ft.

Rio Arriba County

Larrazola & Turner No. 1 Gonzales, SE SW SE sec. 24-32n-1e. (Formerly carried in Colorado.)

San Juan County

Atchison & Galloway No. 1 Patd., C SE SE sec. 19-29n-11w. Drlg. 100 ft.

W. L. Hair No. 1 Hair, NE NW NE sec. 23-29n-11w. S.D. 900 ft.

Kutz Canon O. & G. Co. No. 1 Day, SW SW SW sec. 20-28-10w. T.D. 4,400 ft.; pulled 4½-in.; C.O. 3,900 ft.

Continental Oil Co. No. 54 Tribal, 1,980 ft. W of NE cor. sec. 2-29n-19w. T.D. 741 ft.; tested 30 bbls.; may D.D.

Nick Spatter No. 1 fee, C NE SW sec. 32-21-11w. S.D. 1,780 ft.; T.A.

Southern Union Gas Co. No. 6 Government, C NW NW sec. 19-28-10w. Completed at 2,065 ft. as as well; not tested.

Torrance County

45 Pet. Co. No. 1 Greenfield, C NW SW sec. 17-9-8e. Drlg. 2,000 ft. in green L.

COLORADO

Adams County

Oklahoma Oil Co. No. 1 Baxter, C SW sec. 2-3s-66. T.D. 700 ft.; mixing mud and preparing to resume.

Glenridge Oil Corp. No. 1 Hills, SE SE SE sec. 27-3s-64. Drlg. 4,267 ft.

Archuleta County

William E. Hughes estate No. 8 Gramps, sec. 24-33n-2e (unsurveyed). Spdg. (first report).

William E. Hughes estate No. 9 Gramps, sec. 24-33n-2e (unsurveyed). Spdg. (first report).

Carl D. Linstrom No. 1 Crowley, SE SE SE sec. 3-22n-2e. R.U.

Oil City Pet. Co. No. 1-A Garnett, NW NE NW sec. 25-33n-2e. S.D. 1,515 ft.; top Dakota series 1,415 ft.

Oil City Pet. Co. and Archuleta O. & G. Co. No. 1 Reeder, Lot 5 (SW SE SW), sec. 24-33n-2e. Drlg. 669 ft. in sh.; S.O. 612 ft. in sdy. sh.; bailed 17 gals.; S.O. at 650 ft. in sh.

H. L. Kendrick No. 1 Crowley (unsurveyed), sec. 2-32-1. Drlg. 1,132 ft.

Baca County

Paul R. Robb Pet. Corp. No. 1 Lovett, NW NW NW sec. 24-32s-48w. S.D. 410 ft. for water.

Boulder County

Boulder Prod. & Dev. Co. No. 2 Maxwell, SW SW NE sec. 24-1n-71. R.U.

Costilla County

L. R. Lane No. 2, sec. 25-31s-74. Spdg. in hd. gray sd.; (first report).

Jackson County

Cclorado Oil Ref. Co. No. 1 North Park Coal Co., NW NW sec. 18-9n-78w. Drlg. and U.R. at 2,340 ft.

Jefferson County

Ruby Hill O. & G. Co. No. 1 Braden, SE SE SE sec. 24-4s-6w. S.D. 4,475 ft.; to finance.

Larimer County

Continental Oil Co. No. 8 Buckeye-U. P., C NE SW sec. 31-10n-68. Drlg. 1,205 ft. blk. sh.; 10¾-in. at 1,173 ft. 165 sacks.

La Plata County

McGarr Pet. Co. No. 1 Pinton Mesa, CSL NE NE sec. 34-35n-12w. S.D. 3,500 ft. for 6¼-in.

Las Animas County

Mountain States Oil Corp. No. 1 Nikola, C NE SE sec. 10-34n-62w. S.D. 1,813 ft.

Lincoln County

Consolidated Smelting & Metals Co. No. 1 Hancock, NE NE SW sec. 7-17s-62. S.D. 2,050 ft. for repairs.

Moffat County

Mountain Fuel Supply Co. No. 1 Allen, NE SW SE sec. 32-12n-97w. M.I.M. and drlg. water well.

Mountain Fuel Supply Co. No. 1 Kuykendall, NE NE SE sec. 22-12n-100. Drlg. 2,416 ft.

Texas Co. No. 3 Iles Inv. Co., 200 ft. E of W line, and 165 ft. S of N line, Lot 4, sec. 23-4s-92. Drlg. 2,740 ft.

Morgan County

Swisher et al No. 1 Lunt, 92 ft. W of E line and 360 feet N of S line, sec. 3-4n-60. T.D. 1,449 ft.; R.U.R.

Montezuma County

McElmo Oil Co. No. 1 West, NE NW NE sec. 21-26n-17w. Contracted with Perry Coon to comp.; drld. by tools; making new hole below 3,705 ft.

Park County

South Park Oil Co. No. 1 Lemar, NE NE SE sec. 34-11s-75. Loc.; (first report).

South Park Oil Co. No. 1 LeBert, NE NE NW sec. 21-11s-75w. S.D. 100 ft.; drlg. wtr. well; top Foxhills 32 ft.

South Park Oil Co. No. 1 State, SE NE SW sec. 16-11s-75w. Drlg. 4,558 ft. in sdy. sh.; carrying 6¼-in. at 4,505 ft.; 1,000,000 ft. of gas at 4,540 ft.

Routt County

Mid-Colo. Pet. Co. No. 1 Omoholt, NE SE SE sec. 29-4n-87w. S.D. 2,910 ft.; renewing leases before drlg. into Sundance.

Washington County

I.T.I.O.-Carter-Foster Minerals Corp. No. 1 Vorce, C NE NE sec. 28-1s-49. Cmtd. 15½-in. at around 525 ft.

Weld County

Continental Oil Co. released a location this week for its No. 2 Briggs, C NE SW section 13-6n-61, in the Greasewood pool. Contract has been let to Manning & Martin, Inc. The location is a north offset to the same company's No. 1 Briggs, C SE SW section 13, the best of the three producers drilled in this pool about four years ago. Platte Valley Petroleum Co. No. 1 Patterson, NE SE NW section 24-6n-61, came in on October 10, 1930, as a producer in the Muddy sand at a total depth of 6,667 feet and made as high as 565 bbls. in 24 hours. The Ida Johnson No. 1, C NE NW section 24-6n-61, was completed the following year at 6,656 feet, flowing better than 600 bbls. The Continental No. 1 Briggs, the most northerly of the three producers, was put on production September 29, 1931, making 443 bbls. first 24 hours. Prior to that date, while testing, it made as high as 930 bbls. in 24 hours. Offsets on the west and south were abandoned and a test a little more than a mile to the northeast of No. 1 Briggs also was a failure. There have been no tests to the north or southeast. No. 1 Briggs has produced more than 178,000 bbls. and is still making around 50 bbls. a day natural. All three producers are still flowing and making an aggregate of 70 bbls. a day.

Continental Oil Co. No. 2 Briggs, C NE SW sec. 13-6n-61. Cellar; (first report).

Continental Oil Co. No. 1 State Bank of Trenton, C SW NE sec. 21-8n-59w. Drlg. 5,826 ft. in sh.

Yuma County

The Indian Territory Illuminating Oil Co. is not putting out any information regarding its Beecher Island test and reports lack confirmation, but are given here when they are believed to be reliable. Latest estimated drilling depth is around 4,500 feet. Following a rumor two weeks ago that saturated cores were taken at an unknown depth, the company has been taking additional leases. When drilling started it had a block of 26,000 acres.

Indian Territory Ill. Oil Co. No. 1 Strangways, C NW SW sec. 21-2s-43w. Operator not reporting depth; reported drlg. below 4,500 ft.

WYOMING

Albany County

Geo. D. Parkinson et al No. 1 George & Hunt, NW NE SE sec. 5-17-75w. T.D. 690 ft.; H.F.W.; will lower 12½-in.

California Co. No. 2 Wilson, SW SW SW sec. 18-17n-76. R.U.

Big Horn County

The series of mishaps accompanying the drilling of the Montana-Wyoming Oil Co. No. 1 Government, on the Garland dome, culminated last week in another which proved fatal to Leslie McKay, of Byron, son of Herbert McKay, field superintendent for the Stock Oil Co., which is drilling the well. Young McKay, who had just graduated from the Byron high school, apparently was cleaning up some debris around the well when he was overcome with gas and fell into the cellar. When his body was found he was dead.

The well blew in on January 19 as a gasser, making approximately 60,000,000 feet a day from the top of the Madison. When the valve was closed the well began cratering through some old abandoned holes around the deep test and it was necessary to let it blow. The temperature dropped 20° to 40° below zero and water from the Dakota completely froze in the derrick and equipment and it was impossible to make any progress until the weather moderated. Then on March 3 the gas caught fire. The Stock Oil Co. started a relief well 420 feet to the east of the gasser, intending to go below the Dakota and deflect the hole. In the meantime, the Ohio Oil Co. went into an old well 330 feet to the south, cleaned it out and began to pump water into the flaming gasser through the Dakota sand. Working on an idea developed by Frank Lesh, an oil-well shooter for the Independent Eastern Torpedo Co., equipment for snuffing out the flame was made up in the Ohio Oil Co.'s machine shops at Byron under the supervision of Vice President John MacFayden of that company. Three hundred feet of 6-inch casing was rigged up with a water line running through it to keep the muzzle end cool. A sand line was used to pull the torpedoes from the breech to the muzzle when everything was ready to make the shot. The torpedoes were rigged up with a battery connection and the pipe was wheeled to within about 50 feet of the flame and then slid over the wheel axle to the proper position to snuff out the flame. The shot was then detonated and the flame was snuffed out. Since then work has been centered on cementing off the cratered holes, diverting the gas and getting ready to shut the well in.

J. W. Bales No. 1 Parker, C SW SW sec. 23-4-89. S.D. 690 ft. for pipe.

Joan Oil Co. No. 1 Howell, Lot 63 (NW SE NE) sec. 32-55n-97. Resuming at 1,190 ft.

Jerome Drumheller No. 2 Govt., NW NE SE sec. 17-49n-91. Spdg. 126 ft.

Montana-Wyoming Oil Co. No. 1-X Allen, Lot 52, sec. 18-56n-97w. Drlg. 2,090 ft.; (relief well for No. 1 Allen).

Ohio Oil Co. No. 2 State, NE cor. Lot 38, sec. 36-56n-97. R.U.

Ohio Oil Co. No. 1 Orson Vail, SW NW NE sec. 23-56n-97w. Drlg. 2,627 ft. in sh

Ohio Oil Co. No. 1 Robert Till, C SE SW sec. 24-56n-87w. Drlg. 4,965 ft. in red beds.

Peay Oil Co. No. 1 Denio, Tr., 43-C, sec. 15-55n-87w. T.D. 3,890 ft.; trying to cmt. off wtr. through hole in pipe.

Peter Evanoff et al No. 1 McAllister, NW NE SE sec. 3-55n-97. T.D. 2,467 ft.; C.O. caves.

Stock Oil Co. No. 1 Yates, CSL SW NE sec. 33-56n-87w. Drlg. 2,945 ft.

Taylor Oil Co. No. 1 Robinson, SW SW NW sec. 24-56n-97w. Spdg.

Carbon County

Ohio Oil Co. No. 1 Baker, NW NW SW sec. 2-23n-79. T.D. 1,498 ft.; C.O.

General Pet. Corp. No. 1 Union Pacific SW NW sec. 5-19n-83w. Crg. 2,638 ft.

Ohio Oil Co. and California Co. No. 2 Union Pacific, C NE NE sec. 35-21n-79w. Drlg. 5,299 ft. in Morrison; top at 5,270 ft.

Ohio Oil Co. No. 7 Diamond Cattle, SW SW NW sec. 35-20n-78w. Drlg. 1,725 ft.

Ohio Oil Co. and California Co. No. 3 Union Pacific, C NE SE sec. 23-21n-79w. Drlg. 4,803 ft.

Ohio Oil Co. No. 2 Dixon, SE NE SE sec. 34-20n-78w. R.U. to deepen old well from 3,094 ft. to Sundance.

Sinclair-Wyoming Oil Co. No. 10 Govt., SW SE NW sec. 7-26n-89w. R.U.R.

Union Oil Co. of California and Mutual Oil Synd. No. 1 Union Pacific, 1,890 ft. from E line and 1,320 ft. from S line sec. 1-18-78w. Crg. 4,955 ft. in Lakota; Muddy at 4,788-4,828 ft.; Dakota 4,903-47 ft.; top Lakota 4,952 ft.

Fremont County

Tropic Oil Co. No. 1 Govt., C SE SW sec. 34-27n-90w. T.D. 2,550 ft.; rng. 4¾-in.

Converse County

Chadron-Osage Oil Co. No. 1 State, SW SW sec. 16-32n-69w. Drlg. 2,610 ft.; 10-in. at 2,500 ft.

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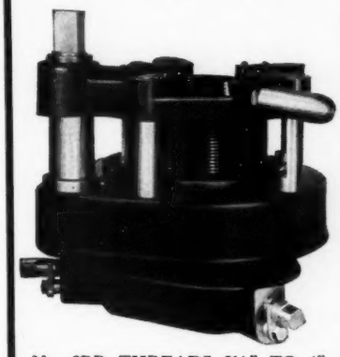

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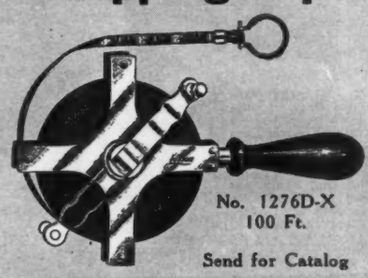

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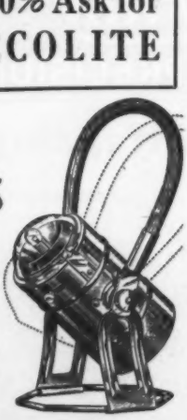

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J. A. Olson No. 1 Reese, C NE SE sec. 10-32n-65w. M.I.M.
Sinclair-Wyoming Oil Co. No. 2-C Muskrat, NE SW SW sec. 1-33n-92w. T.D. 3,970 ft.; rmg. for 9⅝-in. at 2,160 ft.; prep. to core Frontier.

Hot Springs County

California Exploration Co. No. 2 Govt., NW SW NW sec. 4-44-9e. T.D. 4,245 ft.; P. B. to 4,165 ft.; shot second time with 80 qts.; C.O.
Ohio Oil Co. No. 73 Mill Iron Cattle Co., NE SW SE sec. 19-4n-98w. Drlg. 3,581 ft. in red beds.

Lincoln County

Senrab Oil Corp. No. 3 Govt., CSL SE NW sec. 10-26n-113w. S.D. 1,020 ft.
Texas Co. No. 3-D Govt., N SW NW sec. 10-26-113. T.D. 498 ft.; rmg. 12½-in. hole.

Niobrara County

The Lance Creek field developed its second mystery well this week when the Continental Oil Co. discontinued giving out information on its No. 2 Apex-3, C SE NW section 34-36-65. It is an important test of the Sundance on the eastern side of the pool, a little more than a mile to the northeast of the Ohio No. 4 Putnam, the nearest Sundance producer. It is close to two gas wells in the Dakota series completed during the earlier drilling campaign before oil was discovered in the Sundance. Last report on the well was drilling at 3,514 feet. Top of the Dakota was at 3,354 feet. Elevation is 4,387 feet. The other mystery well is the Ohio Oil Co. No. 5 Converse Sheep, on top of the dome, which was a test to the Tensleep and believed to have been a 4,800-bbl. well at below 4,600 feet.

Continental Oil Co. No. 1-B Schuricht, C NW SE sec. 6-35n-6w. Drlg. 3,562 ft. in sh. and shells.
Continental Oil Co. No. 2 Apex-3, C SE NW sec. 34-36n-65w. Depth not reported.
Continental Oil Co. No. 3 Schuricht, C SW NW sec. 5-35-65w. T.D. 265 ft.; cmtd. 13⅜-in. at 241 ft., 250 sacks.
Lewis Gokel No. 1, NE SE NW sec. 31-35n-62w. Drlg. 678 ft.
MacKinnie Oil & Drlg. Co. No. 1 Thompson, NE NW NE sec. 7-36n-65w. Drlg. 2,150 ft.
Ohio Oil Co. No. 8 Lamb, C SW NE sec. 5-35n-65w. Spdg. 406 ft.; cg. 3,989 ft. in basal Sundance; top 3,951 ft.
Ohio Oil Co. No. 5 Converse Sheep, C SE SW sec. 32-36n-65w. S.D. below 4,600 ft.; believed to have cored top of Tensleep.
Ohio Oil Co. No. 5 Putnam, C NW SW sec. 33-36-65w. Rig.
Chester Oil Co. No. 1 fee, NE NE NE sec. 14-39n-61. Drlg. 183 ft.; (formerly Wickersham & Kyle).
S. & H. Dev. Co. No. 1-A Olinger, SW NE sec. 1-36n-63. T.D. 1,700 ft. in Fuson sh.; pulled 4½-in. to rm. to bottom.

Park County

Resolute Oil Co. No. 1 State, C NW SW sec. 16-57-101w. M.I.M. and R.U. to resume at 3,608 ft.

Sheridan County

Beaver Creek Oil Co. No. 1 Allison, SW SE sec. 15-55n-85w. Drlg. 3,090 ft.

Sublet County

Wright & Lackey No. 1 Haddenham, SE NW SW sec. 21-28n-113w. (Dry Piney); R.U. Fort Worth spudder.

Sweetwater County

Mountain Fuel Supply Co. No. 1 Nightingale, C SW NE sec. 32-16n-104w. Drlg. 1,321 ft. in sh.

Uinta County

Badger Basin Oil Co. No. 1-B, NW NW SW sec. 10-14n-118. Drlg. 1,060 ft.

Washakie County

Arlton & Doyle No. 1 Govt., SW SW SE sec. 29-48n-91. Resumed at 900 ft. (cor.); drlg. 984 ft.
Wyoming O. & R. Co. No. 2 Govt., NW SW SW sec. 31-48n-90w. T.D. 1,404 ft.; fsg. tools.
Wyoming O. & R. Co. No. 1 Frison, NW SW NW sec. 14-48n-91. Drlg. 2,203 ft.

Weston County

Conway Oil Corp. No. 1 Govt., C SE NW sec. 7-41n-60w. T.D. 2,306 ft.; testing.
Chas. Stough No. 1 Govt., SW SW SW sec. 22-47n-63w. Drlg. 200 ft.
Beaver Creek Oil Synd., No. 1 State, C NE NE sec. 23-44n-63w. R.U. and ready to spud; W.O. water.
Harkins et al No. 2, NE SW NW sec. 31-46n-63w. Loc.

MONTANA

Carbon County

Bailey-Round Butte Oil Co. No. 1, NW NE SE sec. 2-6s-23. T.D. 1,551 ft.; re-drlg. 1,483 ft.

Daniels County

Whitetail O. & G. Co. No. 1, NW NE NW sec. 10-36n-50e. O.W.D.D.; drlg. 1,865 ft.

Fallon County

Montana-Dakota Utilities Co. No. 1 Unit, NE NE NW sec. 17-4n-62e. T.D. 6,797 ft.; P.B. to 6,756 ft.; water broke in second time; cmtg. third time.
Montana-Dakota Utilities Co. No. 1 Smith, C NE SW sec. 8-4n-62e. Dk. (first report).

Fergus County

Minnesota Co. No. 1 Fenholt, SE NW SW sec. 24-21n-18e. S.D. 1,100 ft.; tools still in hole.
Judith Operating Co. No. 2 Govt., NW NE sec. 35-22n-17e. Drlg. 1,475 ft.; gas and water in sd. at 1,002-1,150 ft.
Kalispel-Kevin Oil Co. No. 2 Emmons, C SW SE sec. 20-21-18e. Drlg. 576 ft.

Glacier County

Cobb & Pardee's No. 1 Stufft, C SE NW section 25-36-6w, the farthest north of any well drilled in the Cut Bank area and 1¾ miles north of the nearest producer, failed to encounter oil in commercial quantities in the Cut Bank sand, but does not necessarily establish the limits of the pool in that direction. It had the Cut Bank sand at 3,006-50 feet with a small show of oil at 3,045 feet and also a small quantity of water. It stopped in the Ellis topped at 3,053 feet and is plugging back to 2,925 feet, where it cemented the 7-inch. It had 13,500,000 feet of gas in the Moulton sand at 2,935-60 feet on the way down and hole will be completed in that horizon.

Three wells were completed, all in proven territory. The Santa Rita Oil & Gas Co. No. 2 Government, NW SW NW section 31-33-5w, reported having 1,400 feet of oil in the hole last week at a total depth of 2,835 feet, was shot at 2,793-2,815 feet and swabbed 30 bbls. first 12 hours.

The Texas Co. No. 2 Unit 9, C SW NE section 9-32-5w, in the southern part of the field, which had some salt water at a total depth of 3,115 feet, was plugged back to 3,090 feet and pumped 68 bbls. in 19 hours. Top of the Cut Bank sand was at 3,047 feet and the pay at 3,079-3,090 feet. Elevation is 4,002 feet.

Neil Spencer No. 2 Tweedy, N SW SE section 25-33-6w, was shut in without testing at 2,982 feet. The Sunburst at 2,914-22 feet was dry. The top of the Cut Bank was at 2,935 feet and the pay at 2,963-77 feet.

The Montana Power Gas Co. No. 4 Seeba, SW SW NW section 2-34-6w, swabbed 51 bbls. first 24 hours at a total depth of 2,925 feet. It was shot at 2,885-2,923 feet and is cleaning out. The Sunburst at 2,770 feet was dry. The top of the Cut Bank was at 2,820 feet and the pay at 2,882-2,925 feet. Elevation is 3,850 feet.

The Santa Rita Oil & Gas Co. No. 1 Lander, C N half SE section 16-35-6w, the biggest well ever completed in the field, made better than 900 bbls. naturally the 152d day after completion. Total production of the well to date is 175,000 bbls., an average of 1,151 bbls. a day.

Cobb-Pardee No. 1 Stufft, C SE NW sec. 25-36n-6w. T.D. 3,063 ft.; P.B. to save gas in Moulton sd. at 2,935-60 ft.
Cobb-Pardee No. 2 Morrison, CEL NE SE sec. 24-33n-6w. Rig.
Cobb-Pardee No. 1 All.-115, C SE SE sec. 31-33n-5w. M.I.M.
Consolidated Gas Co. No. 2 All.-114, C SE SW sec. 31-33n-5w. Bldg. rig.
A. E. Crumley No. 2 Allotted-113, SW NW SE sec. 31-33n-5w. Drlg. 2,300 ft.
Dakota-Montana Oil Co. No. 2 Mattson, N NE NW sec. 14-34n-6w. R.O.G. (first report).
Hannah-Porter Co. No. 1 Allotted-130, C Lot 3, sec. 6-32n-5. Drlg. 2,780 ft.
B. V. Hole No. 1 Tribal, C NW SW sec. 36-33n-6w. M. on loc.
B. V. Hole No. 1 Allotted-124, 640 ft. out of NE cor. sec. 1-32-6w. Drlg. 240 ft.
Kincheloe-Hanlon No. 2 State, NE NE NE sec. 36-33n-6w. Drlg. 2,675 ft.
Kately No. 4 Drumheller-Ward, SE NE NE sec. 10-34n-6w. Cmtd. 7-in. at 2,575 ft.; drlg. pig.; Sunburst at 2,800-30 ft. dry.
R. E. Lee No. 1 All.-137, SE SW NE sec. 26-33n-6w. Cellar (first report).
Manning & Marshall No. 2 Tribal-128, 760 ft. SN, 660 ft. WE, Lot 8 (NW NE), sec. 7-32n-5w. Cmtd. 7-in. at 2,944 ft.; M.I. spudder.
Montana Headlight Oil Co. No. 6 Yunck, C SW NW sec. 1-34n-6w. Drlg. 980 ft.; 10-in. at 475 ft.
Montana Power Gas Co. No. 1 Winkler, C SE SE sec. 28-33-5w. Drlg. 1,585 ft.
Montana Power Gas Co. No. 1 Lagabeer Unit, SE SE NW sec. 17-35n-5w. Drlg. 2,960 ft.
Montana Power Gas Co. No. 1 Mueller, C SE SE sec. 7-33n-5w. Drlg. 1,670 ft.
Nadeau Bros. No. 1 Ewald, C NE SW sec. 9-32n-5w. Rig.
Par Oil Co. No. 7 Haines, NW SW SW sec. 2-34n-6w. Drlg. 2,350 ft.
H. R. Patterson No. 1 Miller, C NE NE sec. 1-33n-6w. Drlg. 2,610 ft.
Stanley Gray No. 1 Allotted-132, NW SE NW sec. 22-34-7w. Drlg. 3,340 ft.
Jack Marshall No. 1 Allotted-119, C SE SW sec. 1-32n-6w. Cmtd. 10-in. at 700 ft.; Colo. 665 ft.
Steel Creek Prod. Co. No. 1 Tarrant, C NW SW sec. 19-34n-5w. Drlg. 785 ft.; Colo. 440 ft.; 10-in. 488 ft.; (formerly R. C. Tarrant No. 1 Hope).
R. C. Tarrant No. 1 Sherburne, 1,980 ft. N SE cor. sec. 4-32n-6w. Spdg. (Loc. cor.).
R. C. Tarrant No. 6 Getty, SE NE SW sec. 2-34n-6w. Drlg. 1,815 ft.
Texas Co. No. 1 Govt., C SW NE sec. 17-32n-5w. Drlg. 2,585 ft.
Whetstone et al No. 1 Tribal-125, SW NE NE sec. 12-32n-6w. Bldg. rig.
Whetstone et al No. 1 Tribal-118, C SW SW sec. 1-32n-6w. Spdg. 200 ft.
Wilkinson et al No. 1 Allotted-127, C NE NE sec. 1-32n-6w. Drlg. 1,675 ft.
Stanley Gray No. 1 Allotted-132, NW SE NW sec. 22-34n-7w. Drlg. 3,555 ft. in Ellis; upper Cut Bank at 3,440 ft.; 8⅝-in. at 3,485 ft.; 100 ft. water in lower Cut Bank.

Petroleum County

H. C. Rowland No. 3 Govt., CEL NE SW sec. 18-17n-24e. Drlg. 407 ft. (cor.).
West Dome Oil Co. No. 1, SW SE NE sec. 9-15-29e. T.D. 1,444 ft.; perforated pipe at 1,260-75 ft. in first Cat Creek; R.U. to pump.

Judith Basin County

Fletcher E. Hunt No. 3, NW SE NE sec. 30-14n-15w. Drlg. 360 ft. (cor.).

Pondera County

Wm. M. Fulton No. 1-A Price, SW NE NE sec. 18-27n-4w. Drlg. 1,790 ft.
Clinch Pet., Ltd., No. 1 Hollan, NW SW NW sec. 12-23-6w. Cmtd. cave at 2,000 ft.; W.O.C.
Texas Co. No. 1 Valier Unit No. 1, C NW SE sec. 32-31n-5w. T.D. 2,902 ft.; C.O. 2,875 ft.; top Cut Bank sand 2,855 ft.; 200 ft. of water at 2,882-2,902 ft.
Gordon Campbell No. 1 Hughes, NW NE NW sec. 12-30n-4w. Drlg. 1,905 ft. red sh.
Jones-Chambers No. 1 Erickson, SW SE SW sec. 3-27-4w. Bldg. drk.

Teton County

R. C. Tarrant No. 1 Wallenstein, NW NW SW sec. 9-27-5w. Drlg. 1,050 ft.

Toole County

Three wells were completed and three new operations were reported in the Kevin-Sunburst field. Two of the completions were dry, but will be acidized in the hope of making them producers. The Big West Oil Co. No. 2 Dalquist, NW NE NW section 21-35-3w, was dry in the Ellis-Madison at 1,797-1,804 feet and will acidize. Fraser & Smith's No. 1 Crabtree, NE NE SE section 14-34-2w, was dry in the Ellis-Madison at 1,374-90 feet, and is acidizing. Coolidge & Coolidge's No. 2 State, NE NW NW section 36-36-2w, was drilled to 1,589 feet and pumped 25 bbls. first 24 hours from the Sunburst at 1,558-87 ft.

Agen & Goeddertz No. 1 Goeddertz, C SE NE sec. 16-35n-3w. Drlg. 1,460 ft.; gas in Sunburst at 1,390-1,403 ft.

(Continued on Page 70)

Hoard Exploration Co.

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Texas and Louisiana Gulf

By
F. L. SINGLETON

LOUISIANA FIELDS EXTENDED AND NEW OIL ZONE IS FOUND

HOUSTON, Tex., June 29.—Interest along the Gulf Coast at the close of the week was centered on three prospective areas where production tests were being made on three wildcats which have previously shown commercial production possibilities. These probable pool openers are located at Greens Lake, Galveston County; Hawkinsville dome, Matagorda County, and the Willis area, Montgomery County. Other interesting developments took place in Coastal Louisiana, where an 1,800-foot south extension was opened at the Jennings field in Acadia Parish, a new producing horizon for the St. Martinsville field in St. Martin Parish, and the opening of a third horizon and a 1,280-foot east extension for the Jeanerette field in St. Mary Parish.

The prospects of Sun Oil Co. No. 1 J. D. Hughes opening a commercial oil field at Greens Lake, southeastern Galveston County, are not so bright at the present time, due to mechanical trouble which has caused the operators to rework the hole in an attempt to revive production. For this reason, the importance of this new strike will probably not be known until the company has drilled its No. 2 Hughes, located 933 feet northeast of the discovery well which was spudded the past week. After making a series of "squeeze-out" cement jobs in an attempt to eliminate salt water, 2½-inch tubing was run, and after packer was set, the well was swabbed in and flowed 134 bbls. in four hours through a three-eighths inch choke and then went dead. It is the opinion of the operators that the hole sanded up. No. 1 Hughes is in the W. C. M. Baker Survey, and is making its bid for production from the Basal Pliocene from 3,610-20 feet.

On the east flank of the Hawkinsville dome, Matagorda County, Sun Oil Co. No. 1 Craig is swabbing in attempt to break cement squeezed into the sand through perforations from 5,150-75 feet. On each swab the operators are recovering 1,500 feet of oil and the fluid is reported to be standing at about 4,000 feet. If the well does not "kick off," the hole will probably be plugged back, sidetracked and redrilled to the Miocene sand beneath an "overhang" of salt. Top of the salt was found at 677 feet, with the base at 1,058 feet. The well is northeast of Hawkinsville, in the Thomas Williams Survey.

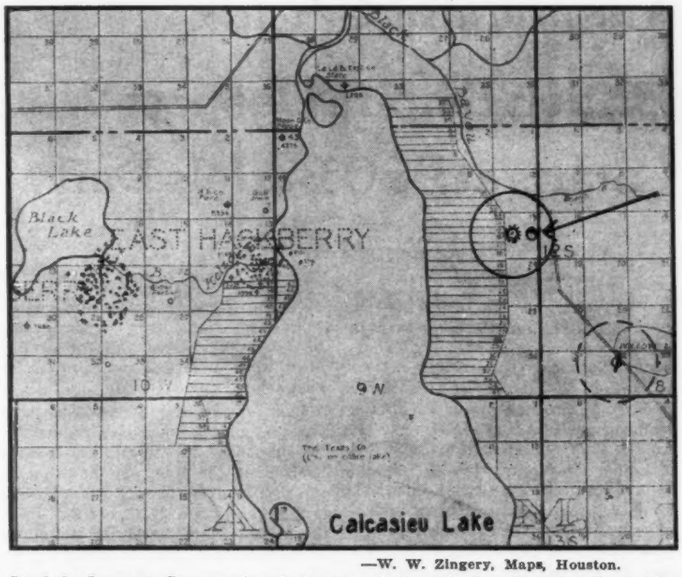
A production test was scheduled on W. O. Bilnoski No. 1 J. W. Wood, located in the Willis area, northern Montgomery County. It is bottomed in the Conroe sand at 3,757 feet and will be tested at 3,745-52 feet, at which depth it showed oil and gas on a drill-stem test. Five and three-sixteenths inch casing was cemented at 3,720 feet. This is the third test to encounter favorable showings in this area. It is located northwest of the town of Willis, in the Wm. Weir Survey.

On the Nome Prospect

Another encouraging showing was found in Shell Petroleum Corp. No. 1 F. H. Carpenter, located on the Nome prospect, Jefferson County, but the sand was passed up and the hole is being carried to the Frio. The latest showings were found at 6,065-70 feet, 6,070-80 feet, and it is coring ahead in shaley sand showing oil below 6,100 feet. Location is in the M. E. Piveto Survey. A mile and a quarter west, Sun Oil Co. No. 1 Long tried to blow out after topping a gas sand at 8,737 feet, thought to be the Frio. The hole is bottomed at 8,750 feet and the gas is now being killed.

In the Amelia field, Humble Oil & Refining Co. completed its fifth producer and announced location for two wells. The completed well, No. 2 Mary E. Langham, flowed 26 bbls. per hour through a quarter-inch choke, with tubing pressure 900 pounds and casing pressure 900 pounds. The sand was at 6,764-78 feet. Seven-inch casing was cemented at 6,774 feet. Derrick is up for No. 3 Pinchback, 794 feet from the west line and 466 feet northwest of the most easterly south line of the lease in the C. Williams Survey. No. 4 Quinn is situated 1,112 feet from the north line and 466 feet from the west line of the C. Williams Survey.

Humble Oil & Refining Co. No. 2 Welder, 6,100 feet west of the discovery well of the Heyser field, Calhoun County, made a 15-minute drill-stem test in the Pettus sand at intervals from 4,864-80 feet and recovered 250 feet of mud and 2,000 feet of salt water, and is drilling ahead in shale below 5,300 feet. A previous test made from 4,850-59 feet showed 400 pounds of pressure and 25 feet of mud in five minutes. The discovery well is producing from sand at 5,465-70 feet, with the hole bottomed at 5,475 feet. Location is in the northwest part of the county, in the Maria Rios Survey.



—W. W. Zingery, Maps, Houston.

Big Lake Prospect, Cameron Parish, location of Magnolia Petroleum Co. No. 1 Alvin Hebert, which has the appearance of opening up the first oil production of this area

Two Short Extensions

On the northwest flank of the South Houston field, Harris County, two short extensions were made. Smith & McDannald completed No. 1 Merridith at 4,775 feet for an initial production of 623 bbls. per day through a quarter-inch choke and Stanolind Oil & Gas Co. No. 1 M. Butz, in Tract 50, flowed 481 bbls. per day through the same size choke from a depth of 5,775. In the north end of the field in the Callahan & Vince Survey, Stanolind No. 3 First National Bank flowed 69 bbls. in 12 hours from sand bottomed at 4,833 feet. In the Townsite area the same company's No. 1 District 24 flowed 91 bbls. in 24 hours from 4,490 feet, and No. 3 Wyndelts, on the northwest side of the field, is flowing into the tanks, but no gauge had been made. Seven-inch casing was cemented at 4,595 feet, with the hole bottomed at 4,775 feet.

Another wildcat location has been announced for Harris County, and it is to be spudded by July 1. The well is to be drilled on the Bammel prospect on a block of 4,500 acres, in the C. Walters Survey, assembled by Steve Paul and others, who made a deal with the Southern Seaboard Oil Co. and C. B. Bunte to drill a 6,500-foot test.

Walter Goldston has made location for a wildcat test to be drilled on the B. W. Burns 20-acre lease in the Juan La Reviere Survey. It is reported that Humble Oil & Refining Co. gave the lease and $14,000 bottom-hole money for a test to be drilled to the Woodbine sand.

In the Quintana area, north of the McFaddin-O'Connor pool, Quintana Petroleum Corp. completed No. 2 Fannie Heard, T. H. Webb Survey, which flowed 1,333 bbls. of oil per day through a three-eighths inch choke from a depth of 5,900 feet. To the north, in the Placedo field, Victoria County, Barnsdall Oil Co. and others' No. 3 Pickering & Roos flowed 186 bbls. in 14 hours through a three-sixteenths inch choke from 4,767 feet; Commonwealth Oil & Gas Co. No. 1 Parencia was completed at 4,776 feet and flowed 75 bbls. per day through a quarter-inch choke and Crown Central Oil Co. No. 3 Gebraner flowed 8½ bbls. per hour through a three-sixteenths inch choke from a depth of 4,373 feet.

In the Pickett Ridge field, Wharton County, Edwards Drilling Co. No. 1 E. D. Farmer cored gas sand at 4,654-84 feet and oil sand at 4,685-98 feet and 7-inch casing has been cemented on bottom at 4,700 feet, where it will be tested through perforated casing. Location is in the I.&G.N. Survey No. 39. West of production in the J. Teleformer Survey, Adrian Moore No. 1 W. P. Wilbeck swabbed salt water on a production test at 4,719 feet and is now shut down.

South Louisiana

Additional development was assured the Jennings field (Evangeline), in Acadia Parish, due to the completion of Shell Petroleum Corp. No. 1 Conover-Community, which opened an 1,800-foot south extension for the field when it flowed 708 bbls. of 37.6 gravity oil per day through a 16/64-inch choke with tubing pressure 2,300 pounds and casing pressure 2,325 pounds. The well was completed from a screen setting made in 15 feet of sand bottomed at 7,545 feet. It is south and west of several deeper producers owned by Stanolind Oil & Gas Co. acquired from Yount Lee Oil Co., who discovered the field in 1900 as the first oil field in Coastal Louisiana. No. 1 Conover-Community is producing from the Oligocene said that was first developed on the dome in 1929. It is located on a 670-acre lease in section 40-9s-2w.

After many weeks of testing va-

rious sands indicated on an electrical coring test. Continental Oil Co. completed No. 1 fee at St. Martinsville, in St. Martin Parish, for the second well in the field. Originally drilled to a depth of 8,150 feet, the hole was plugged back to 7,353 feet. Casing was perforated with 20 holes from 7,344-53½ feet. It flowed 536 bbls. of 30.4 gravity oil per day through a quarter-inch choke with tubing pressure 575 pounds and casing pressure 2,050 pounds. There was no salt water and the well has the appearance of being a better producer than the discovery well of Tide Water Oil Co., completed in the Miocene sand at 5,582 feet. No. 1 fee is located south of the discovery well in section 18-11s-6e.

The first production test made on Magnolia Petroleum Co. No. 1 Hebert, located a half mile east of the company's No. 1 Broussard, which was completed around the first of the year for a distillate producer, tested salt water in 12 feet of oil sand bottomed at 8,618 feet, and the screen is being pulled preparatory to testing at a higher level. The lower sand section will be plugged off and the screen setting is expected to be made at around 8,615 feet.

Estimated daily average production of the principal Gulf Coastal fields in the week ending June 25 follows:

TEXAS COAST

	Bbls.
Anahuac	8,334
Barbers Hill	15,320
Conroe	43,467
Hastings	7,657
Manvel	8,721
South Houston	3,128
Thompsons	9,538
Tomball	7,412
Greta	15,187
Plymouth	9,879
Saxet	11,819
Saxet Heights	8,435
Miscellaneous	57,072
Total	205,969

LOUISIANA COAST

	Bbls.
Bosco	13,587
Caillou Island	14,867
Cameron Meadows	5,225
East Hackberry	8,137
Gillis	15,998
Iowa	17,367
Leesville	13,878
Roanoke	7,335
Sulphur	5,212
Tepetate	3,532
Miscellaneous	41,646
Total	146,784
Total Gulf Coast	352,753

Jeanerette Extended

The Jeanerette field in St. Mary Parish was extended 1,280 feet east and received its third producing horizon by the completion of Herton Oil Co. No. 1 Carter, which flowed 340 bbls. of pipe line oil per day through a three-sixteenths inch choke, with tubing pressure 1,200 pounds. The hole was drilled to 9,602 feet and was plugged back to 7,082 feet and was tested through perforated casing from 7,015-55 feet. This is the sixth producer to be completed by the company. Four of the wells are producing from a sand at 6,600 feet and one at 7,498 feet.

In the "shallow" sand recently opened in the "Graben" area of the Gillis field, Calcasieu Parish, Louisiana and Texas Oil Co. No. 1 M. Buhler was completed through perforated casing from 5,258-62 feet for an initial production of 525 bbls. per day through a quarter-inch choke, with tubing pressure 450 pounds and casing pressure 850 pounds. The well is south of production on a 4½-acre tract in section 11-9s-8w.

A 600-foot northwest extension for the Roanoke field, Jefferson Davis Parish, was made by the completion of Gulf Oil Corp. No. 2-B Anding. The oil sand was topped at 8,715 feet and drilled to 8,724 feet, total depth, where it was completed with an initial production of 900 bbls. of 38 gravity oil per day through a three-eighth inch choke with tubing pressure 725 pounds. It is in the SE quarter of section 2-9s-4w, about 600 feet west and slightly north of the company's No. 1 Anding.

Two more deep producers are scheduled to be completed at the Lafitte field, in Jefferson Parish, by the Texas Co. No. 4 Lafitte, in section 20-17s-24e, cored oil sand at 9,371-83 feet and is bottomed in sand at 9,420 feet, with 7⅝-inch casing cemented at 9,363 feet. No. 4 Rigolettes, in section 29, cored oil sand from 9,366 ft. to 9,402 feet, and 7⅝-inch casing is being cemented after an electrical coring test was run to the total depth of 9,406 feet.

On the Sorrento dome, Ascension Parish, Pan American Producing Co. is preparing to spud No. 5 United Lands, located 3,640 feet south of the north line and 2,835 feet west of the east line of section 15-10s-4e.

Another 10,000-Foot Hole

Coastal Louisiana received it sixth 10,000-foot hole when Continental Oil Co. No. 1 O. C. Hebert, located on the Abbeville prospect, Vermillion Parish, drilled below 10,022 feet. The well is located on an 8,500-acre block in section 20-12s-3e, and two possible oil sands have been indicated on an electrical coring test run to a depth of 8,000 feet. These sands were found at 7,668-82 feet and at 7,884-8,000 feet. The hole will be carried several hundred feet deeper, and another coring test will be made, and a production test will be made of the indicated oil sands.

Canadian Fields

British Empire Deepest Well Starts at 960 Barrels Daily

By VICTOR LAURISTON

CHATHAM, Ontario, June 27.—On the west flank of the structure in the new extension of the South Turner Valley field, Turner Valley Royalties No. 1, LSD 13, section 28-18-2w5, came into big production in the Madison limestone at 6,824 feet. It got the lime some weeks ago at 6,396 feet and after cementing 50 feet in, drilled through two porous horizons, when a production test was undertaken. About 4,000 feet of rotary fluid had been bailed when the well blew into production, throwing light green crude and rotary mud over the derrick. The crude oil flow was accompanied by heavy gas pressure. The well blew wild for several hours before it was placed under control. In the first 24 hours under control it produced 960 bbls. The flow was accompanied by some rotary fluid, indicating that as the porous lime was cleared of this fluid the crude production was likely to increase.

The well is the deepest crude producer in the British empire, and the largest producing oil well drilled in Canada since the famous Oil Springs gushers of 1862. The initial crude production is approximately 50 per cent greater than the peak naphtha recovery of Royalites No. 4 gusher, which opened the Turner Valley field 12 years ago. The location in section 28 is about a quarter of a mile west of Century Royalties No. 1 in LSD 14, which has been rated the largest naphtha producer in the field for some months.

The well was started several years ago by Turner Valley Royalties, Ltd., organized by the late George M. Bell, R. A. Brown and J. W. Moyer of Calgary. At about 3,060 feet the log indicated an exceptionally deep test to reach the Madison, in comparison with the shallower producers on the east side of the same section. The test was shut down and for over a year was regarded as practically abandoned.

Last spring the British-American Oil Co. agreed to assist financially in completing the test to the porous horizon of the lime. In addition to the British-American Royalty interest, Imperial Oil, Ltd., which holds the acreage immediately to the north in section 33-18-2w5, helped to complete the well. Other royalty interests held by Alberta companies are: Vulcan Oils, 15 per cent; McDougall-Segur Oil Co., 11 per cent; Calmont Oils, 6 per cent; Spooner Oils, 5 per cent, and Alberta Pacific Consolidated Oils, 3 per cent. Drilling was resumed last May from 3,060 feet, the cable outfit being replaced with rotary tools.

Late reports indicate an increase in production to around 1,000 bbls. a day. Owing to lack of storage facilities, some of the initial production was lost. The British-American Oil Co. is taking the production under its agreement, initial deliveries being made by truck to the Bell Refining Co. plant at Calgary. The crude is light green and tests 43 to 44 gravity. Clarence E. Snyder was in charge of operations.

The strike tends to confirm the theory held by some operators of a crude oil field on the west side of the structure. Previously, several wells drilled down the west flank got crude instead of naphtha in the lime. In North Turner Valley, Model Oils No. 1, LSD 8, section 22-20-3w5, has maintained for several years a steady crude production, with little gas. This crude is only a few degrees below naphtha. On the west side of the Mercury tract, in section 5-19-2w5, one of the Miracle wells got light crude; and British Dominion No. 4, LSD 8, section 28-18-2w5, a little southeast of Turner Valley No. 1, ranges 53 to 64 Baume. Turner Valley No. 1 is considerably farther west structurally and much deeper, than any of these wells.

The strike is likely to divert the attention of operators to deep drilling areas west of the naphtha producers, nor is this likely to be confined to the South Turner Valley extension, since the isolated crude producers so far drilled are strung along the west flank of the entire Turner Valley field. So far, drilling in section 28 has been mostly in the east half of the section, the western portion being outside the area where the Benton formation outcrops, and consequently requiring deeper drilling.

Richfield Royalties No. 1, LSD 12, section 28-18-2w5, about 1,500 feet south of Turner Valley No. 1, will be completed with rotary equipment by Seattle and Victoria interests, drilling resuming from about 4,000 feet. Renfrew Royalties No. 1 Morris & Goodfellow, LSD 3, same section, a half mile south and a little east of Turner Valley No. 1, has resumed from 6,020 feet where 6-inch casing was cemented 15 feet in the lime. R. W. Brown of Gleichen is reported arranging for development of a block of acreage in the northwest part of the section. East of Turner Valley No. 1 and south of Century Royalties No. 1 naphtha producer, Sunburst-Mid Royal No. 1, LSD 14, standing at about 3,000 feet, will likely be completed to the lime.

Farther south, in section 21-18-2w5, Sovereign Royalties No. 1 Myers & Wright, LSD 14, is installing rotary to deepen from 2,333 feet where 12½-inch casing was cemented. Two other west side tests in this section are likely to resume. Highwood Royalties No. 1, LSD 3, started in 1934 by the Oliver Syndicate, has been standing at 2,460 feet. Northwest Royalties No. 1, LSD 5, some time ago made tentative arrangements for completion by Foundation Petroleums, Ltd., from 3,300 feet. This last test is believed to be a little farther west structurally than the Turner Valley Royalties well.

A mile north of Turner Valley No. 1, Sterling Pacific No. 3, LSD 13, section 33-18-2w5, is below 2,405 feet.

British Dominion Oil & Development Corp. No. 4, LSD 6, section 28-18-2w5, is deepening in the black lime below 6,390 feet. Farther south, Highwood-Sarcee Oils No. 2, LSD 1, section 21-18-2w5, is below 5,545 feet and close to the Madison lime, after getting a good show of light crude in the brown lime at 5,300 feet.

Ontario Operations

In the Dawn field, Lambton County, Ontario, Union Gas Co. No. 80, NW cor. SE¼ Lot 25, Concession 11, Dawn Township, got about 100,000 feet a day at 1,565 feet and is deepening around 1,800 feet. Union No. 81, SE Lot 23, Concession 1, is below 920 feet. Gubb & Russell No. 2, Lot 22, Concession 3, developed 700,000 feet a day after a shot. The shot also developed a non-commercial show of oil. Petroleum Products Syndicate No. 3 is starting in the same lot about 1,000 feet east of No. 2, with Stover & Rawlings of Chatham the contractors. Farther east, Perdue Syndicate No. 1, Barnes farm, Lot 25, Conces-

(Continued on Page 70)

Kansas Developments

By
DAL DALRYMPLE

SIX NEW WILDCAT TESTS IN KANSAS; GUSHER AT LERADO

Wildcat operators continue to look with high favor upon western Kansas as a promising area for exploration and, despite 10 wildcat failures in the Sunflower state the past week, they started operations at six new tests in virgin sectors. The newest wildcat tests are in Pawnee, Kingman, Stafford, Rice, Rooks and Greenwood Counties. Two wildcat pool openers in Ellis County were among the 29 new oil wells to be completed in the state. One gas well was completed and 12 wells were abandoned as dry, including one wildcat each in Rice and Russell Counties and two wildcats each in Rush, Sedgwick, Sumner and Woodson Counties. A total of 45 new wells were started.

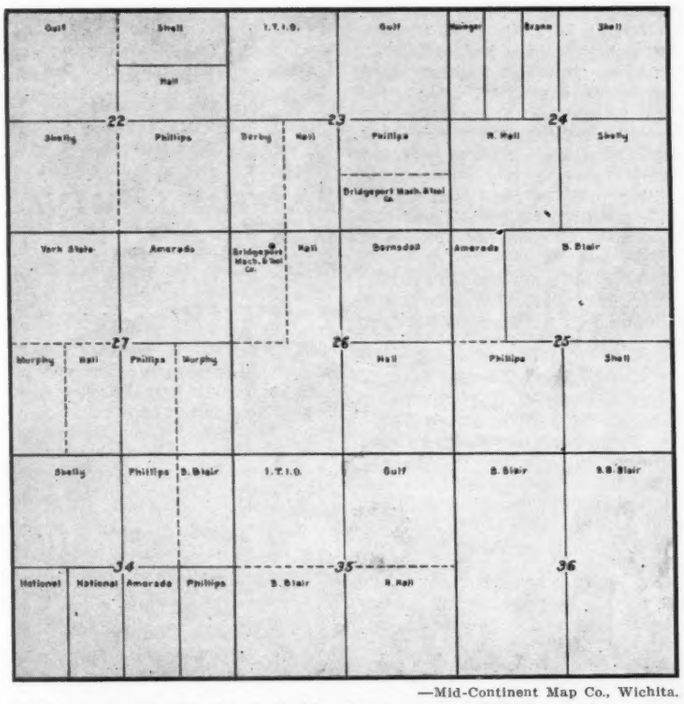
Two of the new wells in Russell County added more than 2,600 bbls. daily production to that prolific county's total. Empire Oil & Refining Co. No. 5 Johnson, in the Sullivan pool southwest of the town of Russell, made potential of 1,347 bbls. from Gorham sand. Bridgeport Machine Co. No. 2 Polcyn, in the east Gorham field, made potential of 1,264 bbls. from Gorham sand. Outstanding developments in Ellis County included Jones Brothers & Carpenter No. 1 Solomon, SE SE SW section 28-11-19w, wildcat northwest of Ellis, which pumped 600 bbls. of oil naturally from 3,632 feet; and Bridgeport Machine Co. and others No. 1 Madden, NE NW NW section 26-15-18w, wildcat in the southern part of the county, which pumped 420 bbls. in 20 hours after acidizing from 3,344 feet. A feature of Reno County operations was Shell Petroleum Corp. No. 1 Whipple, CEL NE section 16-26-9w, in the Lerado area, which flowed 1,333 bbls. of oil in three hours from Viola lime at 4,147 feet. It is the sixth well in the pool. The customary number of completions in busy Rice County were reported.

Kansas producers again have agreed to do their bit in keeping production down to insure continued stabilization of the market. The State Corporation Commission accepted the recommendation of the oil advisory committee that the July allowable for Kansas be 151,629 bbls. daily. This is a reduction of 7.66 per cent from the 164,200-bbl. allowable recommended by the Bureau of Mines. This is a decrease of 12,571 bbls. daily from the bureau's estimate. The reduction, like that in Oklahoma and other states, was a precautionary measure to prevent overproduction. The total potential for Kansas fields now is 1,048,188 bbls., as against 1,037,717 bbls. last month.

Rice County

Darby Petroleum Corp. No. 3 Johnson, C S half S half SW section 10-21-7w, Hauschild area, Rice County, topped Chat at 3,361 feet; total depth, 3,383 feet; flowed 644 bbls. in six hours. made potential of 2,443 bbls. and was completed.

Stanolind Oil & Gas Co. No. 4 Specht, NE SW NE section 6-20-10w, Silica pool, made potential of 1,623 bbls., and was completed at 3,312 feet, total depth. It had Siliceous lime at 3,295-98 feet. Gulf Oil Corp. No. 2 Steckel, SE SE NE section 31-19-10w, topped Siliceous at 3,279 feet; total depth, 3,297 feet; pumped 1,022 bbls. in 19 hours and made potential of 1,437 bbls., completed. Bradley Oil Co. No. 1 Wendell, South, NW NE SE section 32-19-10w, made potential of 1,675 bbls. and was completed at 3,314 feet, total depth. Top of Siliceous lime was 3,299 feet.



—Mid-Continent Map Co., Wichita.

Bridgeport Machine Co. No. 1 Madden Estate, section 26-15-18w, pool opener in Ellis County, Kansas, made potential of 1,264 bbls. of oil

Empire Oil & Refining Co. No. 12 Proffitt, SE cor. section 6-20-9w, was completed at 3,253 feet, total depth, making potential of 805 bbls. after second acid treatment. Top of Siliceous lime was 3,222 feet. After first acid treatment it pumped 229 bbls. in 11 hours. Mid-Continent Petroleum Corp. No. 8 Hartle, SE SE NW section 15-20-9w, topped Siliceous lime at 3,227 feet; total depth, 3,235 feet, completed. It swabbed 84 bbls. in 12 hours before acidizing and made potential of 979 bbls. after acidizing. Herndon Drilling Co. No. 2 Smith, SE SW SE section 16-20-9w, topped Siliceous lime at 3,257 feet; total depth, 3,275 feet. It was acidized, made potential of 341 bbls; acidized a second time, it made potential of 571 bbls., completed. Keith and others No. 1 Doll, SE NE SW section 20-19-9w, topped Siliceous at 3,272 feet, had pay at 3,287-89 feet, total depth, and made potential of 320 bbls. After acidizing, it made potential of 642 bbls. Continental Oil Co. and others No. 3 Lansing, SE SW SE section 25-18-8w, was acidized and made potential of 1,996 bbls., completed. Kansas City lime was topped at 2,705 feet; Siliceous, 3,139 feet; total depth, 3,165 feet. Skiles and others No. 1 Stout, SE cor. section 6-21-9w, wildcat, had a hole full of water and was abandoned at 3,374 feet, total depth. Top of Kansas City lime was 2,952 feet; Conglomerate, 3,305 feet; Siliceous, 3,369 feet.

New work in Rice County: Slick, Pryor & Lockhart and others No. 1 Clair, SW SE NW section 4-18-10w, building rig. Same operators' No. 2 Stumps, NE NW SW section 4-18-10w, location; Shell Petroleum Corp. and others No. 1 Tobias, C S half S half NE section 6-19-9w, moving in material; Texas Co. No. 1 Kleile, NW SW SW section 34-19-10w, location; Empire Oil & Refining Co. No. 1 Coldwater, SE SE SW section 8-20-9w, location; Gulf Oil Corp No. 2 Cross, SW SW NE section 15-20-9w, building rig; same operator's No. 4 Dick, NE NE SW section 15-20-9w, building rig; Stanolind Oil & Gas Co. No. 3 Smith, SW NE SE section 16-20-9w, location; Mid-Continent Petroleum Corp. No. 4 Risse, NE SE NE section 6-20-10w, rigging up rotary; Shell Petroleum Corp. No. 1 Gordon, C W half W half NE section 21-21-10w, wildcat, location.

Estimated Production

Estimated daily average production in Kansas for the week ending June 27 and for the preceding week is as follows:

	Barrels	
	June 27	June 20
Oxford City	6,025	6,100
Burrton	11,750	11,675
Ritz-Canton	6,175	6,150
Hollow-Nikkel	3,825	3,800
Voshell	2,850	2,800
Ellsworth County:		
Lorraine-So. Lorraine	6,800	6,626
Other pools	811	1,531
Rice-Barton Counties:		
Chase	9,807	9,444
Raymond	2,664	3,912
Silica	9,471	11,283
Keesling	3,460	1,719
Miscellaneous Rice	5,308	5,346
Miscellaneous Barton	2,636	2,887
Russell County:		
Fairport	2,605	2,417
Gorham	2,725	3,470
Russell	2,335	2,571
Sullivan	2,390	3,104
Other pools	6,698	7,169
Sedgwick County:		
Valley Center	1,330	1,303
Greenwich	1,255	1,271
Robbins	1,455	1,477
Eastborough	800	811
Other pools	398	386
Ellis County	1,233	1,456
Kingman County	758	539
Stafford County	1,493	1,778
Greenwood County	10,100	10,000
Butler County	17,990	18,010
Other fields	20,853	20,140
Total Kansas	146,000	149,175

Russell County

Texas Co. No. 4 Anschutz, NW NE SW section 1-14-15w, Russell County, topped Oswald lime at 3,038 feet; total depth, 3,122 feet. It was acidized, made potential of 892 bbls. and was completed. Top of Anhydrite was 910 feet. Gulf Oil Corp. No. 4 Ehrlich, SW NW NW section 1-14-15w, topped Anhydrite at 922 feet; Oswald, 3,057 feet; Gorham sand, 3,034 feet; swabbed 265 bbls. in 10 hours and made potential of 341 bbls. of oil, with 17 bbls. of water, completed. Empire Oil & Refining Co. No. 5 Johnson, SW SE NE section 2-14-15w, made potential of 1,093 bbls. in 17 hours, completed. Top of Anhydrite was 935 feet; Oswald, 3,080 feet; Gorham sand, 3,324-25 feet, total depth. Witt No. 2 Witt, SW NW SE section 3-14-15w, made potential of 344 bbls. after acidizing and was completed at 3,125 feet, total depth. Oswald lime was topped at 3,048 feet; pay, 3,066-80 feet. Central Petroleum Co. No. 4 Witt, SE SW SE section 3-14-15w, topped Anhydrite at 928 feet; had Gorham sand at 3,298-3,300 feet, total depth, made potential of 1,308 bbls. in 21 hours, completed.

Bridgeport Machine Co. No. 2 Pol-

cyn, NE NW NE section 10-14-15w, made potential of 1,248 bbls. and was completed in Gorham sand at 3,300-01 feet, total depth. Top of Anhydrite was 942 feet. Coralena Oil Co. No. 1 Sellens, SW SE SW section 20-15-13w, topped Oswald lime at 3,047 feet, had pay at 3,062-64 feet, total depth, was acidized and made potential of 598 bbls., completed. Top of Anhydrite was 832 feet; Topeka, 2,758 feet. Southern Oil Co. No. 2 Schaffer, NW NE NE section 31-15-13w, was acidized and made potential of 1,396 bbls., completed. Oswald was topped at 3,007 feet; Siliceous lime, 3,251 feet; pay, 3,251-53 feet, total depth. Beardmore and others No. 2 Karat, SW SW NE section 27-15-14w, made potential of 253 bbls. after acid treatment, and was completed at 3,371 feet, total depth. Top of Anhydrite was 895 feet; Siliceous lime, 3,353 feet; pay, 3,362-65 feet. R. G. Berry and others No. 1 Cook, NE NE SE section 19-11-13w, wildcat, failed to find Siliceous lime and was dry and abandoned in Chert at 3,605 feet. It topped Anhydrite at 890 feet; Oswald lime, 3,097 feet; Conglomerate, 3,412 feet.

The following new work in Russell County was started: Central Petroleum Co. No. 2 Ginther, SW SW NE section 19-12-15w, cellar; Gulf Oil Corp. No. 5 Ehrlich, SW SE NW section 1-14-15w, rigging up; Empire Oil & Refining Co. No. 6 Crawford, SW SE SW section 2-14-15w, building rig; same operator's No. 7 Johnson, NE SW NE section 2-14-15w, moving in material; same operator's No. 8 Johnson, SE SW NE section 2-14-15w, location; Witt No. 1 Witt, NW NW SE section 3-14-15w, old well deepened to 2,585 feet, swabbed 750 bbls. in 24 hours; W. I. Southern, Inc., No. 1 Sellens, NW NE NW section 29-15-13w, rotary rig; same operator's No. 4 Shaffer, NE NW NE section 31-15-13w, cellar.

Barton County

Sinclair Prairie Oil Co. No. 3 Isern, SW SE SW section 25-19-11w, in the Barton County sector of the Silica pool, made potential of 1,449 bbls. of oil and was completed at 3,296 feet, total depth. Top of Siliceous lime was 3,292 feet. Texas Co. No. 2 Moran, NE SE SW section 25-17-11w, topped Siliceous lime at 3,280 feet; total depth, 3,286 feet. It made potential of 1,159 bbls.; was acidized, and made new potential of 1,549 bbls., completed.

One new test was started in Barton County. Mid-Continent Petroleum Corp. No. 7 Matzek, NW SE SE section 25-19-11w, was a rotary rig.

Reno County

Sinclair Prairie Oil Co. No. 3 Matlock, SW NE SW section 3-24-4w, Burrton area, Reno County, topped Chat at 3,261 feet; Hunton lime, the producing formation, at 3,590 feet; total depth, 3,602 feet. It was acidized, swabbed 855 bbls. in 10 hours, and made potential of 1,046 bbls. of oil, with 40 bbls. of water, completed. Marathon Oil Co. No. 2 Priddle, SW SW SE section 17-24-4w, made potential of 348 bbls. of oil after acidizing. It was producing from Chat, topped at 3,302 feet; total depth 3,371 feet, completed.

In the Hilger area, Magnolia Petroleum Co. No. 2 Clyde Harris, NW NE SW section 9-26-4w, topped Chat at 3,601 feet; Viola lime, the producing horizon, at 4,065 feet; total depth, 4,068 feet, completed. It made potential of 323 bbls. of oil; was acidized and made new potential of 1,115 bbls.

New work in Reno County: Sinclair Prairie Oil Co. No. 3 Collins, C SW SW section 3-24-4w, rotary rig; Texas Co. No. 7 S. Collins, NW cor. section 16-24-4w, building rotary rig; Marathon Oil Co. No. 2 Hill, SE NE SE section 18-24-4w, location; Shell Petroleum Corp. No. 2 L. F. Whipple, C E half E half NW section 14-26-9w, building rotary rig.

Ellis County

Three new producers in Ellis County included two wildcat discovery wells. Harris & Haun and others No. 1 Schmeidler, SE SE SW section 3-13-17w, wildcat northeast of Hays and south of the Shutts area, was acidized with 5,000 gallons and made potential of 676 bbls., completed. Top of Anhydrite was 1,200 feet; Oswald lime, the producing horizon, 3,274 feet; total depth, 3,362 feet.

The other wildcat discovery was the Twin Drilling Co. and others No. 1 Copeland, NE NE SW section 26-14-19w, southwest of Hays and northwest of the Ruder area. It topped Anhydrite at 1,350 feet; Oswald lime, 3,397 feet; La Motte sand, the producing horizon, was had at 3,704-10 feet, total depth. It made potential of 410 bbls. of oil, completed.

In the Ruder area, Tom Palmer & Storm King Oil Co. No. 5 Ruder, NE NE NW section 17-15-18w, pumped 1,120 bbls. of oil in 20 hours after drilling to 3,570 feet, total depth; made potential of 1,367 bbls. and was completed. Siliceous lime was topped at 3,564 feet.

Only one new operation was reported in Ellis County. Texas Co. No. 1 A. Ruder, SE SE NE section 8-15-18w, was a rotary rig.

Stafford County

Stanolind Oil & Gas Co. No. 3 Komarek, SE NW SE section 30-22-11w, Richardson area, Stafford County, topped Siliceous lime at 3,540 feet and was completed at 3,569 feet, total depth. It made potential of 786 bbls. of oil. Top of Anhydrite was 520 feet; Kansas City lime, 3,285 feet. Stanolind Oil & Gas Co. and Amerada Petroleum Corp. No. 1 Elwell, SW SW NE section 23-24-13w, in the St. John area, topped Anhydrite at 800 feet; Kansas City lime, 3,530 feet; had a hole full of water at 3,621 feet, total depth, and was abandoned.

New operations in Stafford County: D. R. Lauck and others No. 1 Snider, SW SW NE section 3-21-11w, location; C. H. Lebow and others No. 1 Wolk, SE SW NW section 3-21-12w, wildcat, rigging up rotary.

McPherson County

McPherson Oil & Gas Co. No. 6 Chundberg, NW SW NW section 32-18-2w, in McPherson County, topped Kansas City lime at 2,307 feet and was completed at 2,331 feet, total depth. It was acidized and made potential of 224 bbls. of oil, two-day average.

Two new tests were reported in McPherson County. Continental Oil Co. No. 2 Hetzke A, NE SW SE section 20-21-1w, was a location. Continental Oil Co. and others No. 4 Hetzke, NE cor. section 29-21-1w, was a location.

Harvey County

Western Kansas Oil & Refining Co. and others No. 1 Hertzler, C NW NW section 13-23-2w, had spudded.

Rush County

Shell Petroleum Corp. No. 1 Shaffer, C NW section 22-18-16w, in the Otis area, Rush County, was dry and abandoned at 3,577 feet, total depth. Topeka lime was topped at 2,905 feet; Kansas City lime, 3,205 feet; several showings of oil and gas were encountered, but water intruded at 3,510 feet.

National Refining Co. No. 1 Werth, NW NE NE section 7-16-18w, wildcat that looked like a new pool opener, had a hole full of water in La Motte sand at 3,624-25 feet, total depth, and was abandoned. At 3,572 feet it was estimated good for 50 bbls. of oil a day. At 3,572 feet it was acidized with 5,000 gallons, pumped 22 bbls. of oil for 22 hours, and made potential of 444 bbls. of oil, cutting 2 per cent water. On the third day after taking potential, it pumped 100 bbls. of oil and 100 bbls. of water, and was deepened to Conglomerate at 3,575 feet, and then La Motte sand. Top of Anhydrite was 1,195 feet; Oswald lime, 3,328 feet.

Ira Keith and others No. 1 Dartmouth Savings Bank, SW SW NE section 3-17-18w, wildcat, had Granite at 3,633-65 feet, and was dry and abandoned. Top of Anhydrite was 1,205 feet; Oswald lime, 3,335 feet.

Sedgwick County

D. R. Lauck No. 1 Parke, SE SE NE section 17-25-2, wildcat, Sedgwick County, was dry and abandoned in Siliceous lime at 3,507-13 feet, total depth. Simpson horizon was topped at 3,423 feet; Burgess sand, 2,934 feet; both formations carrying a hole full of water; Misener sand, 3,342 feet, with a hole full of water; Viola lime, 3,397-3,423 feet.

Joe Aylward and others No. 1 Harrison, SE SE SW section 23-25-2, wildcat, was dry and abandoned in Siliceous lime. It topped Kansas City lime at 2,020 feet; had a hole full of water at 2,430-35 feet; Mississippi lime, 2,810 feet, with a showing of oil; more water at 2,830-45 feet; Viola lime, 3,195 feet; Simpson, 3,250 feet.

Barber County

Barbara Oil Co. No. 2 Alexander, C NW SW section 13-33-13w, in Barber County, was a cellar.

Rooks County

Buckner & Schoff No. 1 McConnel, NE cor. section 24-6-18w, wildcat in Rooks County, had dug ponds.

Kingman County

W. C. McBride, Inc., No. 2-A Wooldridge, SW NE SE section 16-27-7w, wildcat in Kingman County, was building rig.

Pawnee County

Rotary was being rigged up for a new wildcat test in Pawnee County at Kessler & Their and others No. 1 Gustafson, SW cor. section 27-20-16w.

Greenwood County

Colter & Davidson No. 4 Proctor, NE SW SE section 16-26-13, Greenwood County, had Peru sand at 1,098-1,112 feet, total depth, was shot with 60 quarts, swabbed 25 bbls. of oil per day and was completed.

New work in Greenwood County: H. S. Moss Petroleum Co. No. 8 Pixley, NE SE NE section 7-22-10, location; Henderson Oil Co. No. 7 Harlan, SE SW NW section 34-22-11, drilling at 340 feet; Marshall and others No. 1-A Steckel, NE NW SE section 36-24-12, location; Guy Scott and others No. 1 Pedroja, SE NE SE section 6-26-10, wildcat, drilling at 250 feet.

Butler County

Vickers Petroleum Co. No. 3 McCraner "D," C N half NE section 2-25-3, Butler County, had spudded.

Morton County

Texas Interstate Pipe Line Co. No. 1-9 Phillips, C SE section 9-35-39w, Hugoton gas field, Morton County, produced 11,831,000 feet of gas and was completed at 2,838 feet, total depth.

Texas Interstate Pipe Line Co. No. 1-12 Snyder, NW NW SE section 12-35-40w, Morton County, was a location. Location previously had been reported as being in section 12-35-39w, Stevens County.

Sumner County

Pryor & Lockhart and others No. 1 Knowles, SW cor. section 30-30-1, wildcat in Sumner County, topped Siliceous lime at 3,990 feet; had a hole full of water at 4,003 feet, and was dry and abandoned at 4,031 feet, total depth. Top of Kansas City lime was 2,858 feet; Chat, 3,499 feet; Big lime, 3,851 feet; sand, 3,905 feet. Winkler & Koch No. 1-A Wenrich, NW NE SW section 23-32-2, in the Oxford area, had Mississippi lime at 3,265 feet and was dry and abandoned at 3,474 feet. Top of Stalnaker sand was 2,125 feet.

The following new work in Sumner County was reported: Lario Oil & Gas Co. and Barnsdall Oil Co. No. 16 Wenrich, SW SW NW section 23-32-2, rotary rig; Stelbar Oil Corp. No. 4 Barlow, NE NW SE section 33-31-1w, cellar; same operator's No. 6 Erker, NW NW SW section 33-31-1w, set 10-inch casing at 360 feet and waiting on cement.

Woodson County

Foster and others No. 1 Timm, SE NW NE section 36-25-13, wildcat in Woodson County, topped Mississippi lime at 1,520 feet and was dry and abandoned. C. L. Sheedy and others No. 1 Fuhlhage, NE NW SW section 27-25-14, wildcat, had Mississippi lime at 1,545-1,650 feet, total depth, and was dry and abandoned.

Three new Woodson County tests were reported. Woodson County Producing Co. No. 8 Rhea, CWL SE section 13-24-13, was drilling at 1,175 feet. Henderson Oil Co. No. 2 Vostarz, SW NE NE section 23-23-14, had spudded. McClintock No. 1 Vostarz, NE NW NE section 23-23-14, was a machine.

Texas Oil Revenue

AUSTIN, Tex., June 29.—Comptroller George H. Sheppard announced that revenue from the gross production oil tax continued to increase during April, the latest month on which figures were available.

A total of $755,949.14 was collected on 34,936,169 bbls., an increase of $3,397 over the yield of $752,351 on 34,736,169 bbls. produced in March. The increase was attributed to greater production, and was in line with month-to-month increases since January, when the price of oil jumped.

In January $690,123.50 was collected on 32,334,228 bbls., compared with $679,963.65 collected on 33,717,024 bbls. in December. The tax is 2 cents per barrel as long as oil is selling at $1 per barrel or under. When oil sells for more than $1 the tax is 2 per cent of the actual value.

Southwest Texas District

By GEORGE WEBER

POOLS OPENED AND ANOTHER IN PROSPECT IN A BUSY WEEK

SAN ANTONIO, Tex., June 29.—With the opening of new oil production in Bee and Duval Counties and the strong indication of another discovery in Duval County, Southwest Texas, activity in the past week showed much development. Despite a current slump in several of the Laredo district fields, the number of completions ran high, but abandonments both in wildcat and proven areas also rose. A new sand was opened in the Samfordyce field, and showings were had in a deeper horizon in the Saxet field of Nueces County. Activity in this, the busiest of all Southwest Texas areas, is divided among operators drilling for several different sands, and from the results of operations the field is showing for one of the most productive in the entire area.

Bee County, which has seen steady but relatively unimportant development in recent weeks, came to the front during the week as R. B. Swiger No. 1 Voss, in the S. May Survey, was completed for a producer. The wildcat made an estimated 10 bbls. per hour through 1¼-inch choke from the Pettus sand, cored at 4,015-17 feet. Casing pressure was reported at 450 pounds. The discovery is located south of the Ray field, and there was some disagreement among operators as to whether it constitutes a new field or an extension to Ray. However, it has been named the Voss field. A second test is immediately starting west of the new producer, to be drilled by Dirks Brothers on the Bergel tract.

The new production opened in the North Kohler gas area by Mills Bennett No. 2 Peters has been named the Peters field. This well was completed late the preceding week for an initial production of 360 bbls. per day on a half-inch choke. The same operators are drilling a second well in that area.

Southern Duval County

Good indications of a new field in southern Duval County, between Bruni and Hebbronville, were seen late in the week, as plugs were drilled on Rogers & Rogers No. 1 Pena. It is in the west corner of the R. S. de Pena plat, in the Mesquite Trinidad Vela grant, about 3½ miles southeast of the Cole field. The sand was found at 2,850-62 feet in the test and the well was showing oil of 35 gravity or better when swabbing began. Casing was set at 2,845 feet.

An important extension to the Bentonville field in Jim Wells County was indicated by a test made on the LaJita Corp. No. 1 Pope, 2 miles north of the discovery well of the field, Texon & Lucey No. 1 Capwood. Broken sand was cored at 5,350-51 feet and a drill-stem test at 5,340-51 feet showed 120 feet of pipe line oil and 390 feet of oil, cut with mud, but most of which fluid was oil. This 12-minute test was made with one-quarter-inch top and three-eighths-inch bottom chokes. A working pressure of 175 pounds was recorded. The sand tested corresponds to that producing in the new field to the south. This new development, together with the completion of Stanolind Oil & Gas Co. No. 1 Raney for a good producer, make the Bentonville field look much better.

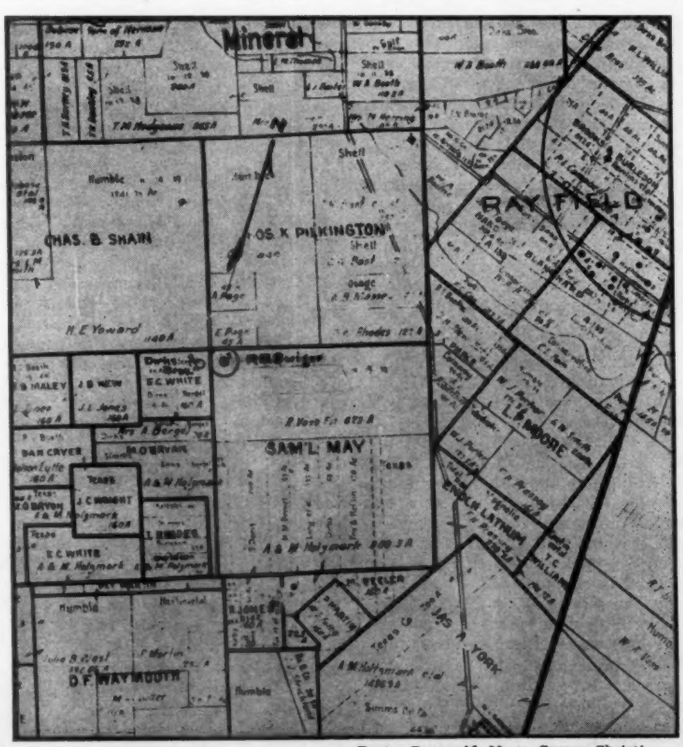
In the next county to the east, the completion of O. W. Killam No. 1 Ellich was notable in view of the fact that the wildcat blew out several weeks ago, destroying much equipment and blowing oil for about a week before it was closed in. The operator, after the well was closed in, killed and plugged back to a gas sand, completing it for a good gasser. Flowing on a quarter-inch choke, the test showed more than 1,200 pounds pressure, and the closed-in pressure was 1,450 pounds. Additional drilling is expected to take place in the vicinity of this test, which is about 1 mile from the Clara Driscoll field.

Saxet Activity

The Saxet field, also in Nueces County, has become the most active area in Southwest Texas, with about 32 drilling wells in the field. The most important development at present is the drilling of the 5,800-foot Frio sand, which has shown up so well over a wide area. During the week three new producers were brought in bottomed in that sand, and 12 additional tests are either on the sand or approaching it. It was extended 3,500 feet to the north during the week by the completion of Houston Oil Co. No. 2 McGregor, which, like many of the operations exploring this horizon, was a workover of an old hole.

Considerable interest was shown in the finding of a sand at 6,299-6,308 feet by Conroe Drilling Co. No. 1-B Rand Morgan. It tested salt water in the 5,800-foot sand but was carried deeper and showed from 12 to 15 feet of gasoline and mud at 6,299-6,308 feet. Salt water was found in the sand, however, and the well is being cored deeper. The showing is important in that it reveals the presence of sands at depths greater than those to which wells have heretofore been carried in search of production, indicating the greater importance which Saxet may attain when deeper horizons are opened.

The presence of a sand overlying the 5,800-foot pay was revealed by the findings of tests in the field. In Southern Minerals Corp. No. 2 Mastin, salt water was tested at 5,836-50 feet and casing was set on an upper sand at 5,751-55 feet. Completion will be attempted in this sand. An important extension was given the 4,000-foot sand in the field when Mills Bennett Production Co. No. 1 Ordner tested 650 feet of pipe line oil in six minutes at 4,098-4,106 feet. The sand was passed up, however, and operators are drilling to the 5,800-foot horizon. The test constitutes a 3,700-foot westward extension in the 4,000-foot sand.



—Porter Regenold, Maps, Corpus Christi.

The new Voss field in Bee County, discovered by R. B. Swiger when No. 1 Voss was completed for 10 bbls. per hour, 2 miles southwest of the Ray field. Dirks Brothers have moved in on a west offset location, No. 1 Bergel

Saxet Heights

Saxet Heights, on the outskirts of Corpus Christi, continues to see considerable activity, although the developments in the Saxet field to the west overshadow it in current importance. Several good producers, most of them in the eastern portion of the field, were completed during the week, and new locations and drilling permits issued presage sustained drilling for some time unless recent reduction in field allowable have a slackening effect, especially in the areas where gas-oil ratios are high.

Webb County

The most important development in Webb County fields during the week was, as usual, in Lopez. Magnolia Petroleum Co., drilling a north offset to its No. 1 Peal, is on the sand, about 10 feet higher than in No. 1, 660 feet to the south. This further substantiates indications of extension of the structure to the north and east. The Peal tests are located across the county line in Duval County. Two other tests have started drilling in the vicinity of the Magnolia tract.

The O'Hern field, to the south, received setbacks when two tests were abandoned as dry. They are located in Blocks 493 and 495 of the Hale subdivision of the Arispe grant.

Duval County

The two most active fields in Duval County—Loma Novia and Seven Sisters—received 15 and 6 new producers, respectively. While this is an increase over last week's total in Loma Novia, activity is declining there, and fewer new locations were announced. The Seven Sisters field is continuing active, with important drilling in the southwest, northwest, and east edges of the proven area.

Hoffman field developments were variable. Three good producers were completed, and three outpost and wildcat tests in the area were abandoned dry during the week.

Samfordyce

The second sand, which has been the center of attraction in the Samfordyce field for several weeks, was brought into production by G. W.

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Wheeler No. 2 Farias, completed for an estimated 200 bbls. per day. The sand was cored from 2,828-53 feet and perforations were made from 2,832-51 feet. The oil is reported to have a slightly lighter gravity than that produced from the regular Samfordyce sand.

Elsewhere in the Rio Grande Valley the Gulf States Oil Co. No. 3 John Engleman was flowing some distillate together with quantities of salt water. The test is in the Mestanas area, where a distillate well was brought in by Gulf States last year. No. 3 Engleman, bottomed at 6,812 feet, was plugged back and tested at 6,688-98 feet, where it showed from 5 to 6 bbls. of fluid per hour, with about 500,000 feet of gas. The fluid averaged 90 per cent salt water. High pressures were encountered, that on the casing being 2,300 pounds. In Mercedes, on the eastern edge of Hidalgo County, the Union Sulphur Co. abandoned No. 9 American Rio Grande after it failed to produce in the field sand.

Details on completed wells and drilling operations in Southwest Texas will be found in the section devoted to drilling operations starting on page 73.

California Fields

(Continued from Page 52)

from 3,186 feet. Three new wells were put on production in the Midway-Sunset field of Kern County, but only one registered satisfactory production. This was Chanslor Canfield Midway Oil Co. No. 17-21, in section 21-32-23, pumping 430 bbls. of relatively clean 17.8 gravity oil per day from 2,105 feet. The Standard Oil Co. No. 203-5-K, another completion in the Midway-Sunset field, pumped 108 bbls. of 22.1 gravity oil per day from 2,435 feet. The Chief Oil Co. No. 3 Francis was good for only 60 bbls. of clean 26.8 gravity oil following completion at 2,689 feet.

The A. T. Jergins Trust added a producer to the Edison field when No. 23-8 Texas fee was brought in pumping 259 bbls. of clean 13.9 gravity oil per day from 1,690 feet. The Shell Oil Co. staked locations for five wells in the Mount Poso field, Kern County. R. S. Lytle completed No. 3 Dorsey in this field a few days ago, pumping 60 bbls. of clean 15.9 gravity oil per day from 1,461 feet.

In the Kern River field, Chanslor Canfield Midway Oil Co. completed No. 61 in section 23-28-27, pumping 120 bbls. of relatively clean 18.2 gravity oil per day from 2,260 feet.

Canadian Fields

(Continued from Page 66)

sion 7, finished at 1,778 feet with 663,000 feet a day.

In Kent County, F. W. Burchell No. 1, Lot 151, Talbot Road, Raleigh Township, got a small show of gas, between 10,000 and 15,000 feet a day, at 1,497 feet and traces of oil at 1,520 feet, and quit at 1,543 feet when it encountered salt water. It will be plugged back and shot.

In the west end of Elgin County, Henry Buller is starting a 360-foot lime test on acreage about 2 miles east of a deep well drilled several years ago by Vacuum Gas & Oil Co. at Clearville.

In Chatham Township, Kent County, T. Ogletree No. 1, near Appledore, is below 1,400 feet without a show. Stover & Rawlings are locating a test for Ajax Oil & Gas Co. of Toronto in the eastern extension of the Dover field. It will be drilled to the Trenton limestone. In the south end of the Tilbury field, H. H. Stubble is starting a test for the Southern Ontario Gas Co. in Lot 20, Concession 5, Romney Township.

In the Brownsville field, Oxford County, Dexter Oil Co. No. 1 Childs, Lot 21, Concession 12, Dereham Township, finished at 1,355 feet with only about 2,000 feet of gas from the Clinton sand. It failed to get production in the Guelph-Niagara at 910 feet and is being abandoned. Treleaven Syndicate No. 4 has been located in Lot 23, Concession 11, 350 feet north and 100 feet west of No. 3 gasser.

North Texas Completions

Archer County

Burns & Tidewater No. 6 Turbeville "Simms," 1,087 feet, dry. Continental Oil Co. No. 1 R. C. Kinder, 2,206 feet, dry. Hamer & Scholl No. 4 W. L. Andrews, 1,099 feet, dry. Huggins and others No. 14 Henry Ford, 993-1,003 feet, 10 bbls. Panhandle Refining Co. No. 6 Farmer B, 1,527-58 feet, 4 bbls. Regal Oil Co. No. 5 L. F. Wilson, 1,618-22 feet, 20 bbls. W. C. Young, Jr., No. 2 T. V. Carr, 1,428 feet, dry.

Clay County

Metzner & Vurns No. 1 Taylor, 500 feet, dry.

Cooke County

Leo Moore and others No. 3 Yosten, 972-79 feet, 20 bbls. Schermerhorn Oil Co. No. 4 Mary A. Kessler, 1,296-1,356 feet, 90 bbls. Seitz and others No. 1 Field & Bowers, 3,342 feet, dry.

Jack County

C. C. Bloodworth No. 1 Jackson, 600 feet, dry. Harper Petroleum Corp. No. 1 S. V. Van Hooser, 2,300 feet, dry. Iron Mountain Oil Co. No. 1 W. H. Helvey, 3,012-22½ feet, 35 bbls.

Montague County

Arco Oil Co. No. 3 Salmon D, 982-95 feet, 12 bbls. O. V. Beck No. 20 Mrs. C. L. Davenport, 1,662-79 feet, 55 bbls. G. M. Holmes No. 1 H. D. Field, 2,532 feet, dry. Lesh & McCall No. 6 Cunningham A, 915-35 feet, 30 bbls.

Wichita County

J. M. Karstetter No. 3 F. P. Warren, 570-78 feet, 2 bbls. G. V. Minnich No. 1 Martin, 706 feet, dry. Worth Oil Co. No. 5 J. L. Jackson, 702 feet, dry. L. T. Burns No. 11 J. L. & T. J. Waggoner, 1,547-55 feet, 5 bbls.; No. 13 J. L. & T. J. Waggoner, 1,545 feet, dry. Douglas Production Co. No. 23 Douglas, 989 feet, dry; No. 24 Douglas, 302-04 feet, 4 bbls. George B. Ray No. 2 Robinson, 1,893-1,926 feet, 75 bbls. Sussex Oil Corp. No. 6 Hines, 1,600 feet, dry.

Wilbarger County

Pettit & Terrill No. 1 R. L. Castleberry, 815 feet, dry. Staley & Wynne No. 10 Waggoner B, 1,900-17 feet, 23 bbls.

Young County

Duncan & Holt No. 13 Benson, 907-11 feet, 300 bbls. Gorsuch Oil Co. No. 20 Mathews, 721-56 feet, 25 bbls. J. E. McDonald and others No. 2 Jeffery, 823-35 feet, 20 bbls. Petroleum Producers Co. No. 2 Clara E. Luton, 672-75 feet, 40 bbls. Premier Investment Co. No. 1 Mrs. D. L. Keith, 692 feet, dry. E. D. Reed and others No. 1 Hattie P. Cunningham, 566 feet, dry. Sams-Meyers No. 1 I. E. Self, 716-34 feet, 20 bbls. Curtis & Bracken No. 1 Aller fee, 4,400 feet, dry.

East Texas Completions

Anderson County

Texas Co. No. 1 Woodhouse, total depth 5,318 feet, 35 bbls. in 24 hours through one-eighth inch choke.

Kaufman County

Scott & Woodsie No. 1 Robinson, total depth 2,510 feet, dry and abandoned, elevation 406 feet.

McLennan County

Riley & Barrow No. 1 Hortsman, dry and abandoned 475 feet.

Titus County

Sanders & Murchison No. 1 Talco School Lot, total depth 4,340 feet, top sand 4,185 feet, 325 bbls. in 24 hours, elevation 372 feet. Tide Water Oil Co. No. 1 Carr, total depth 4,340 feet, 43 bbls. per hour through 2½-inch tubing.

Van Zandt County

Humble Oil & Refining Co. No. 19 Blake, total depth 2,951 feet, 424 bbls. in three hours through 1-inch choke.

Rocky Mountain Fields

(Continued from Page 64)

Agen & Goeddertz No. 2 Goeddertz, C SE NE sec. 16-35n-3w. Drlg. 150 ft. (first report).
Alexander-Sorrell No. 1 Strange, NE NE SE sec. 31-35n-3w. Drlg. 400 ft.
Boru Oil Co. No. 1 Reynolds, SW NE NW sec. 31-33n-4w. Cmtd. 10¾-in. at 222 ft.; Colo. 180 ft.
Cassidy & Cassidy No. 2 Carlson, W SE NE sec. 22-35n-3w. Drlg. 150 ft. (first report).
A. E. Crumley No. 9 Shaw, SE SW NE sec. 35-36n-2w. T.D. 1,566 ft.; Sunburst 1,536-66 ft.; 350 ft. of oil; will shoot.
Carscallen & Mitchener No. 1 Krueger, 1,320 ft. W of E line, 1,980 ft. S of N line, sec. 10-34n-2w. T.D. 1,650 ft.; acidized; did not recover load.
Coolidge & Coolidge No. 1 Hanlon, SW SW SE sec. 26-36n-2w. Drlg. 300 ft.
Coolidge & Coolidge No. 2 Shaw, SE SE SE sec. 26-36n-2w. Drlg. 1,258 ft.
Continental Oil Co. No. 8 State, NE SE NE sec. 16-35n-2w. R.U.
Continental Oil Co. No. 9 State, SE SW NE sec. 16-35-2w. Drlg. 1,509 ft. blk. sh.
Cook & Eddy No. 1 Larum, NE SE NW sec. 25-36n-2w. R.U. (first report).
Imperial-Craig Oil Co. No. 19 Bluhm, NE NW NW sec. 19-35n-1w. Drlg. 1,557 ft.
T. P. Kyle No. 1 Wolnsti, CSL SE SE sec. 3-37n-1w. T.D. 850 ft.; fshg. (note change in loc.).
Ke-Sun Oil Co. No. 7 Stewart, NE NE sec. 25-35n-3w. Drlg. 1,350 ft.
Wm. McKnight No. 3 Seabrook, NE NW SW sec. 19-35-2w. Drlg. 1,475 ft.
Munger No. 1 Peterson, NW NW SW sec. 8-35n-2w. T.D. 1,200 ft.; fsg.
C. T. Olen No. 6 Engemoen, SE SW NW sec. 14-35n-2w. Drlg. 1,175 ft.
E. O. Reickoff No. 2 Govt., SW SW NE sec. 3-35n-3w. Drlg. 1,660 ft.; hole caving.
Welch Bros. No. 1 Dewald, SW NE NE sec. 26-36n-2w. T.D. 1,787 ft.; fsg.
Watson No. 1 Leach, SE SE NE sec. 31-35n-3w. Drlg. 1,750 ft.
Superior Oil Co. No. 5 Haugen, SE SE NE sec. 11-35n-3w. Drlg. 1,002 ft.
Nepstead & Vanderpas No. 1 Solberg, NE NW SE sec. 20-35n-3w. T.D. 1,873 ft.; Ellis-Madison 1,865 ft.; 50 ft. of oil; will acidize.
R. C. White No. 2 Haugen, CNL NE SE sec. 11-35n-3w. Drlg. 925 ft.

UTAH

Daggett County

Mountain Fuel Supply Co. No. 1 State NW SE SW sec. 16-3n-24e. R.U. boilers.

Emery County

California Co. No. 1 Palm, Unit 1, C SW SW sec. 22-23s-11e. Erecting dk.

Grand County

Columbia Crude Co. No. 1 Rath, SW SE sec. 12-35n-20e. Drlg. 962 ft.
Utah Southern Oil Co. No. 1 Hyde, SE NW NW sec. 32-22e. S.D. 4,880 ft. to resurvey; went through 2,400 ft. of Permian, Rico and Cutler beds.

Utah County

Diamond Oil Co. No. 4 Govt., CSL SE NW sec. 10-8s-5e. T.D. 3,956 ft.; cmtd. 3½-in. at 3,950 ft.

Summit County

Longwell Pet. Co. No. 1, SE SW SE sec. 35-3n-5e. T.D. 1,445 ft.; fshg.

Washington County

Arrowhead Pet. Corp. No. 1-A, SE SW NE sec. 1-43s-15w. Drlg. 2,477 ft. after cmtg. off tools.

Lafitte, Coastal Louisiana, Regarded as World's Deepest Commercial Field

By NEIL WILLIAMS

Producing from a sand at 9,600 feet, the Lafitte field, in Jefferson Parish, Coastal Louisiana, is believed to be the deepest commercial field in the world. There are fields with production below that depth in California, and one well in Oklahoma has made some oil at a lower level, but the production has not been of a volume which would justify calling it "commercial," and considering the depths of the wells ordinarily would not be looked upon as economically commercial. At Lafitte the production has been of prolific and consistent potentialities.

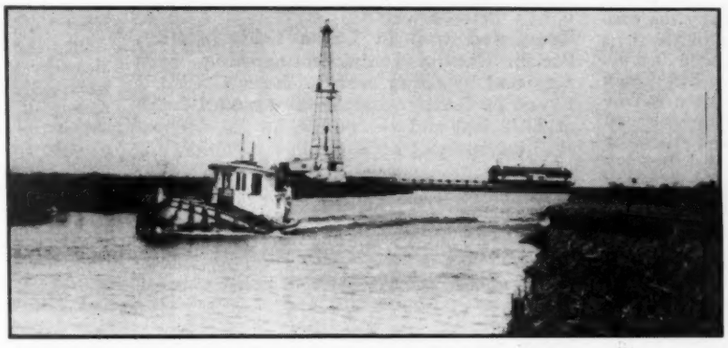
This field, sometimes designated as Bayou St. Dennis, was opened in May, 1935. The discovery well, the first test drilled, was completed at a total depth of 9,577 feet with an initial production of approximately 2,500 bbls. daily through a three-eighths inch choke gauging 1,600 pounds pressure. Since then five other wells have been brought in without a failure. The deepest of these was completed at a depth of 9,647 feet.

Development so far has indicated this to be a field of more than ordinary importance on the Gulf Coast. Being owned and operated in its entirety by the Texas Co., the drilling has been carried on orderly and consistently so that there has been no rapid proving up of the productive area, but in the six wells completed, the field already extends more than a mile across.

Lafitte has been of unusual interest not only because of its depth but because of its location, the type of development, conditions, and the potentialities it offers for development in its present productive horizon as well as in other horizons.

As it stands, the field has not been defined in any direction, and based on the records of the wells already completed it will cover a wide area, with extensive reserves in the 9,600-foot horizon. Three shallower sands are known to exist, these being at 5,100 feet, 6,800 feet and 8,100 feet. These were passed by the first test, which was drilled as exploratory test. However, these sands are being accurately cored in all the tests drilled and when desired can be proved up. In addition, even at the depth of 9,600 feet, the present productive sand is only in the base of the Miocene, and the prolific Oligocene sands, particularly the Marginulina and the Frio, which are productive at much shallower depths in other fields further west in Coastal Louisiana and in Coastal Texas, are yet to be drilled.

Lafitte is believed to be a deeply seated salt dome, a type of field which is taking a prominent place in oil development further westward in Louisiana and in Texas but which until now has not figured in southeastern Louisiana development. The nature of the terrain, largely low marshes, in southeastern Louisiana has limited geophysical exploration and wildcatting, and what domes have been found have been of the shallower so-called piercement type. This part of the coast remains more or less virgin territory with the development of the Lafitte field an incentive for more intensive exploration for additional fields of that type. The dipping and thickening of formations into southeastern Louisiana, with indication of such structures and overlying production at great depths, is of especial interest.



All operations in the Lafitte field, Jefferson Parish, Louisiana, are carried on by water. Tugs used in towing barges. In background drilling barge and its auxiliary boiler barge in canal around bend

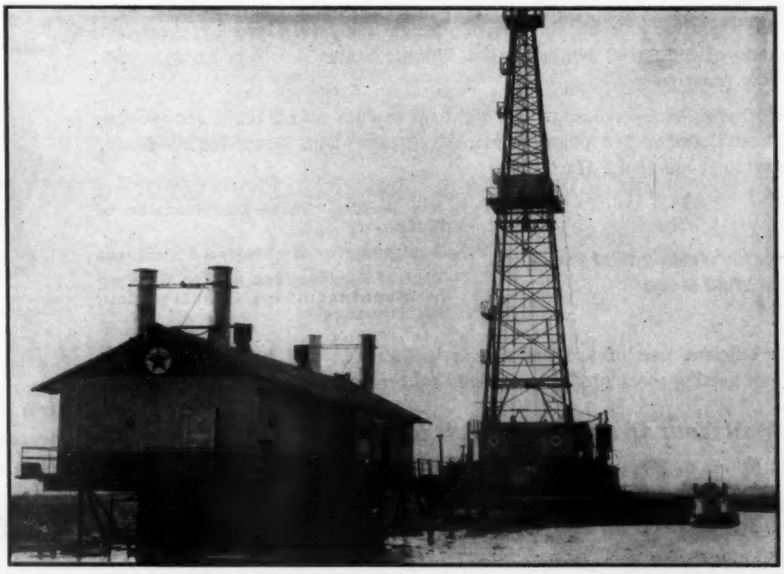
Incidentally, the Lafitte field is the first for Jefferson Parish, Louisiana. Its location is approximately 25 miles south of New Orleans, and about 15 miles west of the Mississippi River in the low-lying marsh district. Remote by air-line from other fields of southeastern Louisiana, it is more remote by routes by which it is possible to reach the field. Only by boat can access be obtained to the field, the location being 7 miles south of the little town of Lafitte, which is the terminus of the road southward from New Orleans. Beyond and around the town of Lafitte, and also off the high strip which the road from New Orleans follows, the country is nothing but swamps and marshes.

Development of the field is entirely by maritime practices, as is the case in most of the other fields which have been opened in southeastern Louisiana. Thus, in the actual operations there is nothing particularly unusual for operators in that part of the Gulf Coast, except in so far as the development is the deepest maritime work that has ever been done.

With the exception of the first two wells, drilling has been done off barges. For this, canals are dredged to the locations as made, and with these the drilling barges and power plant barges are moved on to drill the wells. The first two wells drilled were set up on matting foundations but the ground in this district is extremely unstable and considerable difficulty was experienced. During the drilling of the first well and running of casing, the foundation settled over 2 feet. Fortunately, the settling was even and no harm was done, but on the second well the settling was not uniform. This necessitated jacking up one side of the mat, which in view of the soil conditions was a difficult proposition.

The drilling barges being used in the field are of the largest and heaviest type which as yet has been built, although in general design and in operation they are similar to those which have been operated in other fields and which have been described on several occasions. These barges have proved extremely adaptable to deep drilling, and their use has made possible operating and drilling in this field at costs comparable with those in other fields of more accessible and substantial terrain conditions. In fact, with the use of barges, and other maritime equipment there is no more difficulty attached to drilling in the Lafitte area than in most any other field. Dupree Cut, a canal dredged by the government, runs through the field, and connecting with other main waterways in Coastal Louisiana, provides access for heavy barge movement so that equipment and supplies can be brought in easily. Barge transportation of equipment is the least expensive of any form of conveyance. Illustrative of these low costs is the fact that a full string of casing for one of these deep wells can be brought in by barge direct to the well for a cost of only $50 while if the field were on dry land and the pipe were hauled in by truck the cost would be in the neighborhood of $2,000.

As additional locations for wells are made and canals extended to them or new canals dredged, the field is becoming a network of canals with ready access to any part by boat,



Drilling barge and boiler barge in operation in canal, Lafitte, Jefferson Parish

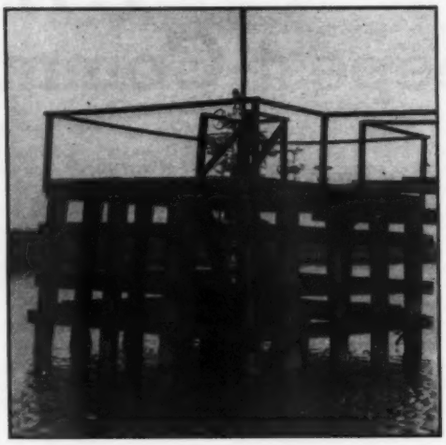
otherwise, it is impossible to get around as the ground will not support so much as the weight of a man. Dredging of canals is the only extra expense involved over land operations, but in view of the very soft and mulky soil, dredging is done rapidly and without trouble.

Providing foundations for tanks and field buildings, however, necessitates the use of matting or piling. Tanks and buildings are set up on the edges of the canals where they will be accessible by boat. Matting foundations are used for temporary construction but these are not entirely substantial and for permanent construction piling is used. Walkways, which also have been built to various parts of the field also are on piling. A small office building and warehouse for small equipment recently has been built. Also the Texas Pipe Line Co. recently installed a pumping station for pumping oil by pipe line from the field to its Marrefo terminal on the Mississippi River.

At present the men in the field, of which there are more than 70, are taken care of in house boats. Two two-story house boats have been provided, these containing bunking quarters, a complete kitchen and dining room, and recreational facilities. The boats are tied up in a cut at the side of a canal. Construction of a permanent camp, being erected on piling, and similar to the camps which have been built by the company in its other remote and isolated fields, is under way, and when this is completed the use of the house boats will be discontinued. Although house boats are equipped with every convenience are comfortable in most every way, these are used only for temporary quarters in each of the water located fields the company has developed. In every case, as these fields are developed, the company seeks to provide permanent facilities and equipment.

Under the present schedule, the men stay in the field 12 days, and are taken out 4 days. Any of the men who desire can live at Lafitte and go back and forth each day, but to do this they must have boats as there is no regular transportation to the field. Provisions are brought to the field from Lafitte daily. Fresh water, the scarcest item, is barged from New Orleans.

Actual drilling of these deep wells presents no unusual problems. With the exception of one well which encountered some hard formations, digging has been extremely easy, and wells have been put down in as few as 45 days and it is expected this time will be materially reduced as more wells are drilled. One of the early wells required 120 days but this experienced some trouble.



Completed well in Lafitte field, Jefferson Parish, Coastal Louisiana, showing wells protected by piling braces. Texas Co. No. 2 Bayou St. Dennis, completed at a total depth of 9,040 feet and claimed to be the deepest commercial producer in the world

The casing program which has been followed calls for approximately 100 feet of 18-inch conductor pipe; approximately 2,000 feet of 13⅜-inch surface casing, with 7⅝-inch casing being run for the flow string. From the seat of the 13⅜-inch casing, 12½-inch hole is dug, and in view of the depth approximately 7,000 feet of open hole is carried. For the flow string, Grade D, 30-pound pipe is used, 6,000 feet of the string being regular casing and the remainder upset. This practice is followed because of the great weight involved in handling such a long string.

Pipe line outlet for the field was provided last January with the laying of 26 miles of 6⅝-inch (O.D.) line to Marrero, Texas Pipe Line Co.'s terminal on the Mississippi River just across from New Orleans. Previously, the oil was barged out of the field, moving up Dupree Cut into the Intercoastal Canal, and thence to the Mississippi River, and to Marrero. Laying of the line, which was done under contract by the Apex Construction Co., involved some unusual procedure, this being described in an article in the January 30 issue of The Oil and Gas Journal.

B. L. Bundy is superintendent in charge of operations at Lafitte.

Carbon Permit Denied

The Oklahoma supreme court reversed a decision of the State Corporation Commission issued months ago granting to Ben H. Ashe and associates a permit to construct and operate a carbon black plant near Guymon in Texas County.

The court ruled the commission does not have authority to empower persons to use natural gas from wells which produce only gas in the manufacture of carbon black. The court pointed out use of gas for carbon black, under present laws, must be from wells which also produce oil. Oklahoma statutes require utilization of natural gas only for lights, fuel or power.

Relief must be obtained from the legislature, as neither the commission nor the court can grant relief, the decision stated.

E. H. Collins of Philadelphia, Pa., has been elected vice president in charge of sales for the Standard Oil Co. of Pennsylvania, a subsidiary of the New Jersey Standard unit. Mr. Collins joined Standard of New Jersey in 1919.

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WILDCAT OPERATIONS

CALIFORNIA

IMPORTANT WELLS AND NORTHERN CALIFORNIA WILDCATS

Company, well and location—	S.T.R.	Depth	Status
Shell Oil Co., No. 16 Capitan, Santa Barbara Co.	32- 5-30	1,130	sd. sh. drlg.
Shell Oil Co., No. 17 Capitan, Santa Barbara Co.	32- 5-30	971	sd. sh. drlg.
La Canada Oil Co., No. 1 Capitan, Santa Barbara Co.	35- 5-30	1,141	dry; abd.
Barnsdall-Rio Grande, No. 12 Elwood, Santa Barbara	15- 4-29	6,363	P.B. 6,363
Barnsdall-Rio Grande, No. SA-38 Elwood, S. Barbara	tideland	3,460	sd. sh. drlg.
Rush Oil Co., No. 1 Santa Maria, Santa Barbara Co.	13-10-34	1,901	may abdn.
Union Oil Co., No. 6 Santa Maria, Santa Barbara Co.	24-10-34	2,450	sd. sh. drlg.
Union Oil Co., No. 16 Orcutt, Santa Barbara Co.	26- 9-34	3,850	sd. sh. drlg.
Moore, Inc., No. 1 Santa Maria, Santa Barbara Co.	25-10-35	4,192	hd. sh. drlg.
Bankline Oil Co., No. 1 Coal Oil Pt., Santa Barbara Co.	tideland	5,510	redrlg. 2,198
Union Oil Co., No. 10 Bardsdale, Ventura Co.	12- 3-20	6,183	O.S. drlg.
Calco Pet. Co., No. 1 Las Posas, Ventura Co.	17- 3-20	3,479	bailing
Calkan Pet. Co., No. 1 Sespe, Ventura Co.	23- 5-20	576	cleaning out
Supreme Oil Co., No. 1 Sespe, Ventura Co.	1- 4-20	902	sd. sh. drlg.
Condor Oil Co., No. 1 Sespe, Ventura Co.	6- 4-19	1,264	hd. sh. drlg.
Topa Topa Oil Co., No. 1 Sespe, Ventura Co.	33- 5-19	1,813	hd. sd. drlg.
Wasibi Oil Co., No. 1 Sespe, Ventura Co.	33- 5-19	201	cleaning out
Bestco Pet. Co., No. 1 Shiells Canyon, Ventura Co.	2- 3-19	4,560	gr. sd. drlg.
Bankline Oil Co., No. 1 Shiells Canyon, Ventura Co.	3- 3-19	4,617	pump. 70 b.d.
Petroleum Securities, No. 1 Shiells Canyon, Ventura Co.	3- 3-19	3,798	O.S. drlg.
Texas Co., No. 129 Shiells Canyon, Ventura Co.	4- 3-19	4,812	P.B. 4,260
Texas Co., No. 130 Shiells Canyon, Ventura Co.	4- 3-19	3,482	sd. sh. drlg.
Texas Co., No. 131 Shiells Canyon, Ventura Co.	4- 3-19	3,297	sd. sh. drlg.
El Rancho Oil Co., No. 1 Shiells Canyon, Ventura Co.	9- 3-19	4,041	cleaning out
Bolsa Chica Oil Co., No. 3 Temescal, Ventura Co.	4- 4-18	3,120	O.S. drlg.
Bolsa Chica Oil Co., No. 4 Temescale, Ventura Co.	4- 4-18	799	cmtd. 575
Ventura Expl. Co., No. 1 Saticoy, Ventura Co.	30- 3-22	7,772	gr. sd. drlg.
General Pet. Corp., No. 2 Oxnard, Ventura Co.	26- 2-23	7,831	sd. sh. drlg.
Continental Oil Co., No. 5 San Miguelito, Ventura Co.	24- 3-24	6,035	to redrl.
C. C. M. Oil So., No. 1 Javon, Ventura Co.	15- 3-24	4,813	cmtd. 4,573
Continental Oil Co., No. 2 Pirie, Ventura Co.	13- 4-23	1,223	cleaning out
Standard Oil Co., No. 1 Lost Hills, Kern Co.	2-26-20	6,660	sd. sh. drlg.
Associated Oil Co., No. 2 Lost Hills, Kern Co.	2-26-20	1,143	pump. 20 b.d.
East Puente Oil Co., No. 21 McKittrick, Kern Co.	11-30-21	1,265	rig. to pump
Calcrude Pet. Co., No. 1 McKittrick, Kern Co.	34-30-22	1,504	P.B. 1,460
Welport Oil Co., No. 15 McKittrick, Kern Co.	26-29-21	675	sd. sh. drlg.
Bergman, H. L., No. 1 McKittrick, Kern Co.	30-30-22	1,197	sd. sh. drlg.
Standard Oil Co., No. 4 North Belridge, Kern Co.	36-27-20	8,300	hd. sd. drlg.
Associated Oil Co., No. 5 North Belridge, Kern Co.	34-27-20	6,720	hd. sh. drlg.
Belridge Oil Co., No. 18-35 North Belridge, Kern Co.	35-27-20	7,697	sd. sh. drlg.
Belridge Oil Co., No. 17-35 North Belridge, Kern Co.	35-27-20	8,160	will cmt.
Union Oil Co., No. 20 North Belridge, Kern Co.	36-27-20	9,684	fish. D.P.
Union Oil Co., No. 21 North Belridge, Kern Co.	36-27-20	8,197	br. sh. drlg.
C. C. M. Oil Co., No. 18 Kern Front, Kern Co.	23-28-27	2,260	pump. 120 b.d.
C. C. M. Oil Co., No. 19 Kern Front, Kern Co.	23-28-27	1,375	sd. sh. drlg.
Republic Pet. Co., No. 11 Kern Front, Kern Co.	11-28-27	1,952	pump. 212 b.d.
Republic Pet. Co., No. 14 Kern Front, Kern Co.	12-28-27	1,954	O.S. drlg.
Seven Spot Oil Co., No. 1 Kern Front, Kern Co.	13-28-27	1,228	cmtd. 1,150
Texas Co., No. 5 Kern Front, Kern Co.	23-28-27	2,090	cmtd. 2,090
National Oil Co., No. 6 Kern Front, Kern Co.	11-28-27	1,902	pump. 77 b.d.
General Pet. Corp., No. 7 Kern Front, Kern Co.	14-28-27	1,841	sd. sh. drlg.
American Expl. Co., No. 1 Kern Front, Kern Co.	16-28-27	2,862	recmtd. 2,813
Ohio Oil Co., No. 11 Premier, Kern Co.	32-27-27	2,477	sd. sh. drlg.
Ausbrit Oil Co., No. 1 Premier, Kern Co.	20-27-27	2,139	P.B. 2,075
Bourke-Dyer Oil Co., No. 1 Dominion, Kern Co.	28-26-28	1,571	sd. sh. drlg.
Modoc Pet. Co., No. 1 Dominion, Kern Co.	28-26-28	754	sd. sh. drlg.
Santa Carla Oil Co., No. 1 Dominion, Kern Co.	19-26-28	1,170	sd. sh. drlg.
Union Oil Co., No. 11 Mount Poso Tribe, Kern Co.	28-27-28	1,778	sd. sh. drlg.
Cal-Coast Apex Oil Co., No. 1 Mount Poso, Kern Co.	36-26-27	1,560	hd. sh. drlg.
General Pet. Corp., No. 30 Mount Poso, Kern Co.	16-27-28	1,577	pump. 219 b.d.
General Pet. Corp., No. 33 Mount Poso, Kern Co.	16-27-28	1,471	sd. sh. drlg.
Bargol Oil Co., No. 1 Mount Poso, Kern Co.	11-27-27	2,600	sd. sh. drlg.
Tilton & Harp, No. 1 Mount Poso, Kern Co.	6-27-28	2,450	fish. D.P.
Lytle, R. S., No. 1 Mount Poso, Kern Co.	26-27-28	1,438	pump. 60 b.d.
Dixie Lee Oil Co., No. 4 Fruitvale, Kern Co.	23-29-27	3,218	cmtd. 3,179
Mosebach Oil Co., No. 1 Fruitvale, Kern Co.	21-29-27	4,121	recmtd. 4,030
Trico Oil & Gas Co., No. 1 Fruitvale, Kern Co.	23-29-27	3,218	swabbing
H. L. J. Oil Co., No. 1 Fruitvale, Kern Co.	23-29-27	3,212	bailing
Magnet Oil Co., No. 3 Fruitvale, Kern Co.	21-29-27	1,560	sd. sh. drlg.
Western Gulf Oil Co., No. 24 Fruitvale, Kern Co.	22-29-27	3,697	cmtd. 3,587
Western Gulf Oil Co., No. 26 Fruitvale, Kern Co.	27-29-27	3,437	cmtd. 3,595
Mohawk Oil Co., No. 16 Fruitvale, Kern Co.	26-29-27	3,300	sd. sh. drlg.
Tarr & McComb, No. 3 Fruitvale, Kern Co.	23-29-27	3,850	redrlg. 3,120
Nydia Pet. Co., No. 1 Fruitvale, Kern Co.	26-29-27	3,568	cmtd. 3,422
Hogan Pet. Co., No. 15 Mountain View, Kern Co.	4-31-29	6,006	will cmt.
Hogan Pet. Co., No. 16 Mountain View, Kern Co.	32-30-29	4,170	sd. sh. drlg.
Buffalo Oil Co., No. 3 Mountain View, Kern Co.	19-30-29	4,800	sd. sh. drlg.
Petrol Prod. Co., No. 1 Mountain View, Kern Co.	22-30-29	5,884	sd. sh. drlg.
Treasure Oil Co., No. 1 Mountain View, Kern Co.	12-30-28	5,400	gr. sd. drlg.
Shell Oil Co., No. 11 Mountain View, Kern Co.	32-30-29	5,275	sd. sh. drlg.
Vesta Pet. Co., No. 10 Mountain View, Kern Co.	19-30-29	5,110	will cmt.
Mohawk Pet. Co., No. 1 Arvin, Kern Co.	10-31-29	4,991	sd. sh. drlg.
R. & R. Dev. Co., No. 3 Arvin, Kern Co.	32-30-30	860	cmtd. 360
Ohio Oil Co., No. 1 Rio Bravo, Kern Co.	1-30-25	8,363	sd. sh. drlg.
Barnsdall Oil Co., No. 5 Round Mountain, Kern Co.	7-28-29	1,570	sd. sh. drlg.
Shell Oil Co., No. 6 Round Mountain, Kern Co.	7-28-29	1,579	pump. 120 b.d.
Shell Oil Co., No. 13 Round Mountain, Kern Co.	7-28-29	1,895	pump. 198 b.d.
Shell Oil Co., No. 14 Round Mountain, Kern Co.	7-28-29	1,934	P.B. 1,890
Shell Oil Co., No. 15 Round Mountain, Kern Co.	20-28-29	461	sd. sh. drlg.
Petroleum Securities, No. 5 Round Mountain, Kern Co.	6-28-29	171	sd. sh. drlg.
Honolulu Oil Corp., No. 20 Round Mountain, Kern Co.	18-28-29	2,140	pump. 580 b.d.
Honolulu Oil Corp., No. 56 Round Mountain, Kern Co.	18-28-29	1,920	O.S. drlg.
Jergins Trust, No. 24 Edison, Kern Co.	23-30-29	1,690	cmtd. 1,548
Jergins Trust, No. 25 Edison, Kern Co.	14-30-29	2,502	recmtd. 1,670
Jergins Trust, No. 26 Edison, Kern Co.	23-30-29	1,160	sd. sh. drlg.
Union Oil Co., No. 4 Edison, Kern Co.	14-30-29	1,463	sd. sh. drlg.
Wood-Callahan Oil Co., No. 1 Edison, Kern Co.	21-30-29	3,186	cleaning out
Wood-Callahan Oil Co., No. 2 Edison, Kern Co.	23-30-29	2,072	cmtd. 1,970
Higgins, W. F., No. 1 Edison, Kern Co.	17-30-29	3,689	sd. sh. drlg.
M. & L. Oil Co., No. 1 Edison, Kern Co.	23-30-29	2,078	cmtd. 1,815
Texas Co., No. 1 San Emidio, Kern Co.	11-11-22	7,622	C.O. 5,942
Bender, E. A., No. 1 San Emidio, Kern Co.	14-10-23	602	sd. sh. drlg.
Seaboard Oil Corp., No. 3 Buttonwillow, Kern Co.	8-28-23	3,817	22,850 m.c.f.
C. C. M. Oil Co., No. 17 Midway-Sunset, Kern Co.	21-32-23	2,105	deepened
Evans, H. B., No. 11 Midway-Sunset, Kern Co.	35-32-23	786	O.S. drlg.
Gibson Oil Co., No. 5 Midway-Sunset, Kern Co.	8-11-23	2,665	sd. sh. drlg.
Chief Oil Co., No. 3 Midway-Sunset, Kern Co.	6-11-23	2,689	pump. 55 b.d.
General Pet. Corp., No. 15-B Midway-Sunset, Kern Co.	6-11-23	2,388	bailing
General Pet. Corp., No. 335 Midway-Sunset, Kern Co.	35-12-24	1,006	O.S. drlg.
North American Oil Co., No. 2 Midway-Sunset, Kern	2-32-24	1,841	sd. sh. drlg.
Signal Oil Co., No. 6 Midway-Sunset, Kern Co.	8-11-23	2,100	sd. sh. drlg.
Hoyt, Otis, No. 2 Midway-Sunset, Kern Co.	1-11-24	130	sd. sh. drlg.
Standard Oil Co., No. 203 Midway-Sunset, Kern Co.	5-11-23	2,435	bailing
Standard Oil Co., No. 9 Midway-Sunset, Kern Co.	5-11-23	2,742	sd. sh. drlg.
Standard Oil Co., No. 55 Midway-Sunset, Kern Co.	33-32-24	2,962	sd. sh. drlg.
South Cerritos Oil Co., No. 1 Midway-Sunset, Kern Co.	23-32-23	1,590	cmtd. 1,430
Alford Oil Co., No. 5 Midway-Sunset, Kern Co.	4-32-23	3,358	rig. to pump
Associated Oil Co., No. 61 Midway-Sunset, Kern Co.	35-31-22	1,105	fishing
Burkeholder Oil Corp., No. 1 Midway-Sunset, Kern Co.	23-32-23	2,231	sd. sh. drlg.
Union Oil Co., No. 8 Midway-Sunset, Kern Co.	25-12-24	2,507	will deepen
Texas Co., No. 15 Midway-Sunset, Kern Co.	32-32-24	2,838	cmtd. 2,669
Obispo Oil Co., No. 12 Midway-Sunset, Kern Co.	32-12-23	3,526	prod. test
St. Helens Pet. Co., No. 1 Midway-Sunset, Kern Co.	22-32-24	3,310	fishing
Jerman, R. W., No. 1 Midway-Sunset, Kern Co.	31-12-23	3,380	P.B. 2,780
Ohio Oil Co., No. 1 Tejon, Kern Co.	36-11-19	3,762	sd. sh. drlg.
Reserve Oil & Gas Co., No. 5 Tejon, Kern Co.	32-11-19	691	sd. sh. drlg.
Western Gulf, No. 3 Cantua, Fresno Co.	3-17-15	6,800	form. test
Conlon, J. M., No. 1 Coalinga, Fresno Co.	30-19-15	1,120	sd. sh. drlg.
Standard Oil Co., No. 2 South Coalinga, Fresno Co.	31-21-15	606	sd. sh. drlg.
Union Oil Co., No. 1 Lillis-Welsh, Fresno Co.	24-21-16	11,127	P.B. 10,729
K. N. D. A., No. 2 Kettleman North, Fresno Co.	20-21-17	8,378	fishing
K. N. D. A., No. 38 Kettleman North, Fresno Co.	18-21-17	7,974	sd. sh. drlg.
K. N. D A, No 43 Kettleman North, Fresno Co.	30-21-17	5,100	sd. sh. drlg.
K. N. D. A., No. 74 Kettleman North, Fresno Co.	30-21-17	8,220	sd. sh. drlg.
K. N. D. A., No. 81 Kettleman North, Fresno Co.	24-21-16	7,573	br. sh. drlg.
K. N. D. A., No. 36 Kettleman North, Kings Co.	36-22-18	9,733	P.B. 8,550
K. N. D. A., No. 83 Kettleman North, Fresno Co.	32-21-17	6,874	br. sh. drlg.
K. N. D. A., No. 21 Kettleman North, Fresno Co.	34-21-17	7,700	sd. sh. drlg.
Standard Oil Co., No. 38 Kettleman North, Fresno Co.	27-21-17	7,360	cmtd. 7,358
Standard Oil Co., No. 25 Kettleman North, Fresno Co.	19-21-17	7,860	sd. sh. drlg.
Standard Oil Co., No. 43 Kettleman North, Fresno Co.	19-21-17	7,740	sd. sh. drlg.
Standard Oil Co., No. 56 Kettleman North, Fresno Co.	19-21-17	7,942	hd. sd. drlg.
Standard Oil Co., No. 65 Kettleman North, Fresno Co.	19-21-17	7,920	recmtd. 7,915
Standard Oil Co., No. 72 Kettleman North, Fresno Co.	19-21-17	8,131	cleaning out
Standard Oil Co., No. 3 Kettleman Middle, Kings Co.	19-23-19	130	sd. sh. drlg.
Kettleman View Oil Co., Well No. 1, Kings Co.	29-22-19	1,629	will P.B.
Hurndall, John, No. 1 Pyramid Hills, Kings Co.	16-24-18	1,986	pump. test
Commonwealth Consd. Gas, No. 2 Tulare Lake, Kings	21-22-20	2,495	hd. sh. drlg.
Associated Oil Co., No. 1 Avenal, Kings Co.	35-23-17	792	sd. sh. drlg.
United Oil Co., No. 1 Panorama, San Luis Obispo Co.	2-32-21	1,198	hd. sd. drlg.
Taft Well Drlg. Co., No. 1 Pismo, San Luis Obispo Co.	31-31-13	4,296	will P.B.
Martin, J. D., No. 4 Pismo, San Luis Obispo Co.	5-32-13	2,256	sd. sh. drlg.
Martin, J. D., No. 5 Pismo, San Luis Obispo Co.	5-32-13	1,966	sd. sh. drlg.
Birch-Royer Oil Co., No. 1 Pismo, San Luis Obispo Co.	33-31-13	1,850	survey. hole
Jergins Trust, No. 1 Pismo, San Luis Obispo Co.	5-32-13	114	sd. sh. drlg.
Barnsdall Oil, No. 1 Carissa Plains, San Luis Obispo	24-28-17	3,559	will cmt.
Burch, I. L., No. 1 Cuyama, San Luis Obispo Co.	4-10-26	275	sd. sh. drlg.
Standard Oil Co., No. 2 McDonald Island, San Joaquin	25- 2-4	....	bldg. rig
Pure Oil Co., No. 4 Chowchilla, Madera Co.	20-10-14	2,620	sd. sh. drlg.
Northern Counties Pet., No. 1 Tehama, Tehama Co.	25-24-3	7,997	hd. sh. drlg.
Shell Oil Co., No. 1 Branch, Monterey Co.	34-24-10	8,994	P.B. 8,750
Texas Co., No. 2 Eureka, Humboldt Co.	22- 3-1	4,371	sd. sh. drlg.

KEY TO ABBREVIATIONS USED IN DRILLING REPORTS

Abd., abandoned.
Bldg., building.
B.D., barrels daily.
B.P., back pressure.
B.R., building rig.
Br. sh., brown shale.
B.S., basic sediment.
C.P., casing pressure.
Cd. or Crd., cored.
C.D., corrected depth.
Cg., coring.
C.L., center line.
Cmtd., cemented.
C.O., cleaning out.
Comp., completed.
Compr., compressor.
C.P., casing pressure, also cement through perforations.
Csg., casing.
D.D., drilling (or drilled) deeper.
Drlg., or Drg., drilling.
Drk. or Dk., derrick.
D.S., drill stem.
D.&A., dry and abandoned.
Fsg., fishing.
Gbo., gumbo.
G.I., gas injection.
Gr., gravity.
Gr. sd., gray sand.
Grn. sh., green shale.
Hd. sd., hard sand.
H.F.W., hole full of water.
I.P., initial production.
L., lime.
L.D.D., later drilled deeper.
Lnr., liner.
Loc., location.
M.I.M., moving in material.
M.I.R., moving in rig.
M.I.R.T., moving in rotary tools.
M.O.T., milling on tools.
O.I.H., oil in hole.
O.S., oil sand.
O.T.D., old total depth.
O.W.D.D., old well drilling deeper.
O.W.P.B., old well plugging back.
P.B., plugging or plugged back.
P.B.P., pulling big pipe.
P.L., pipe line.
P.L.O., pipe line oil.
Pmpg., pumping.
P.O.P., putting on pump.
P.P., pulled pipe.
Rd. sd., red sand.
Rd. sh., red shale.
Recmt., recemented.
Rmg., reaming.
Redrlg., redrilling.
Rng., running.
R.O.G., rig on ground.
R.P., rock pressure.
R.U., rigging up.
R.U.R., rigging up rotary.
R.U.R.T., rigging up rotary tools.
R.U.S.T., rigging up standard tools.
R.&T., rods and tubing.
S. or Sd., sand.
S.D., shut down.
Sd. sh., sandy shale.
Sdtr. or St., sidetracking.
S.D.P.L., shut down for pipe line.
S.D.W.O., shut down awaiting orders.
S.G., show gas.
Sh.&L., shale and lime.
S.I., shut in.
S.I.P., shut in, prorated.
S.L.M., steel line measurement.
S.O., show oil.
S.O.G.&W., show of oil, gas and water.
Spdg. or Spd., spudding.
S.R., straightreaming.
Stdg., standardizing (also standing).
S.W., salt water.
Swbg., swabbing.
T.A., temporarily abandoned.
Tbg., tubing.
T.D., total depth.
T.P., tubing pressure.
Tr., tract.
U.R., underreaming.
W.I.H., water in hole.
W.O., workover.
W.O.C. or W.O.C.S., waiting on cement to set.
W.P., working pressure.
W.S.O., water shutoff.
W.S.O.O.K., water shutoff O.K.
W.S.O.N.G., water shutoff no good.
W.S.R. or W.O.S.R., wait on standard rig.
Wtr., water.

Amerada Pet. Co., No. 1 Rio Vista, Solano Co.	26- 4-2	4,485	8,750 m.c.f.
Fortine, W. H., No. 1 Terra Bella, Tulare Co.	22-22-26	2,376	sd. sh. drlg.
Associated Oil Co., No. 1 Sargent, San Benito Co. ...	5-12-4	....	material

IMPORTANT WELLS AND SOUTHERN CALIFORNIA WILDCATS

Company, well and location—	S.T.R.	Depth	Status
Marvin, J. L., No. 1 El Segundo, Los Angeles Co. ...	7- 3-14	7,521	P.B. 7,475
Ohio Oil Co., No. 1 El Segundo, Los Angeles Co. ...	7- 3-14	5,681	sd. sh. drlg.
Signal Finance, No. 1 Hawthorne, Los Angeles Co. ...	10- 3-14	3,841	cleaning out
Brown, R. A., No. 1 Torrance, Los Angeles Co.	31- 3-14	3,661	pump. 180 b.d.
White Five Oil Co., No. 1 Torrance, Los Angeles Co.	31- 3-14	3,885	cleaning out
Langstaff Pet. Co., No. 1 Torrance, Los Angeles Co.	31- 3-14	950	sd. sh. drlg.
Regent Oil Co., No. 1 Torrance, Los Angeles Co. ...	6- 4-14	3,567	pump. 170 b.d.
Sterling Oil Co., No. 1 Torrance, Los Angeles Co. ...	31- 3-14	4,200	redrlg. 3,720
Dumas-Brown Oil Co., No. 2 Torrance, Los Angeles Co.	6- 4-14	311	sd. sh. drlg.
Dumas-Lewis Oil Co., No. 2 Torrance, Los Angeles Co.	6- 4-14	3,360	sd. sh. drlg.
B. & N. Oil Co., No. 1 Torrance, Los Angeles Co. ...	18- 4-14	3,597	sd. sh. drlg.
Lawler Pet. Co., No. 2 Torrance, Los Angeles Co. ...	31- 3-14	1,963	sd. sh. drlg.
Macvan Oil Co., No. 1 Torrance, Los Angeles Co. ...	31- 3-14	3,741	cleaning out
Texas Co., No. 6 Redondo, Los Angeles Co.	5- 4-14	173	sd. sh. drlg.
Continental Royalties, No. 1 Torrance, Los Angeles Co.	6- 4-14	3,293	sd. sh. drlg.
Rennek Oil & Gas Co., No. 1 Torrance, Los Angeles Co.	5- 4-14	3,448	bailing
C. C. M. Oil Co., No. 23 Torrance, Los Angeles Co. ...	8- 4-14	4,887	P.B. 4,854
Standard Oil Co., No. 78 Inglewood, Los Angeles Co.	17- 2-14	3,460	cmtd. 3,388
Standard Oil Co., No. 19 Inglewood, Los Angeles Co.	17- 2-14	2,970	form. test
Silver Pet. Co., No. 1 Inglewood, Los Angeles Co. ...	16- 2-14	2,451	sd. sh. drlg.
Shell Oil Co., No. 22 Inglewood, Los Angeles Co. ...	8- 2-14	1,700	cmtd. 1,700
West American Oil Co., No. 1 Dominguez, Los Angeles	3- 4-13	9,001	C.P. 8,497
Shell Oil Co., No. 7 Dominguez Reyes, Los Angeles Co.	33- 3-13	5,497	O.S. drlg.
Shell Oil Co., No. 85 Dominguez Reyes, Los Angeles Co.	33- 3-13	4,565	flow. 380 b.d.
Union Oil Co., No. 8 Dominguez Carson, Los Angeles	33- 3-13	7,306	sd. sh. drlg.
Union Oil, No. 47 Dominguez Callender, Los Angeles	33- 3-13	6,175	sd. sh. drlg.
Union Oil, No. 43 Dominguez Heilman, Los Angeles	33- 3-13	3,388	fish. D.P.
Union Oil, No. 38 Dominguez Callender, Los Angeles	33- 3-13	6,730	deepening
Barnsdall Oil Co., No. 15 Rosecrans, Los Angeles Co.	18- 3-13	5,682	will deepen
Republic Pet. Co., No. 1 Rosecrans, Los Angeles Co.	18- 3-13	4,670	sd. sh. drlg.
Mars Oil Co., No. 1 Athens, Los Angeles Co.	7- 3-13	3,968	pump. 50 b.d.
Associated Oil Co., No. 18 Seal Beach, Los Angeles Co.	11- 5-12	5,215	O.S. drlg.
Continental Oil Co., No. 39 Seal Beach, Los Angeles Co.	3- 5-12	4,903	test. W.S.O.
Standard Oil Co., No. 27 Seal Beach, Los Angeles Co.	3- 5-12	6,470	flow. 290 b.d.
Eastern Oil Co., No. 1 Del Rey, Los Angeles Co. ...	22- 2-15	7,436	prod. test
Union Oil Co., No. 22 Del Rey, Los Angeles Co.	27- 2-15	6,049	flow. 75 b.d.
Union Oil Co., No. 23 Del Rey, Los Angeles Co.	27- 2-15	269	sd. sh. drlg.
Yant Pet. Corp., No. 1 Newhall, Los Angeles Co.	1- 3-16	2,024	bailing
Holbrook Pet. Co., No. 1 Newhall, Los Angeles Co. ...	28- 4-13	3,566	pump. 145 b.d.
Harbor Pet. Co., No. 1 Wilmington, Los Angeles Co.	28- 4-16	261	sd. sh. drlg.
Hull, James, No. 1 Wilmington, Los Angeles Co. ...	20- 4-13	3,643	sd. sh. drlg.
Codri Oil Co., No. 1 Wilmington, Los Angeles Co. ...	29- 4-13	3,901	test. wet
General Pet. Corp., No. 1 Wilmington, Los Angeles Co.	4- 5-13	3,019	flow. 200 b.d.
Monarch Oil Corp., No. 1 Topango Canyon, Los Angeles	5- 1-16	1,530	sd. sh. drlg.
Standard Oil Co., No. 82 Montebello, Los Angeles Co.	2- 2-12	8,550	hd. sh. drlg.
Standard Oil Co., No. 85 Montebello, Los Angeles Co.	2- 2-12	3,000	sd. sh. drlg.
Standard Oil Co., No. 86 Montebello, Los Angeles Co.	2- 2-12	2,130	sd. sh. drlg.
Universal Consd., No. 7 Montebello, Los Angeles Co.	5- 2-11	2,961	sd. sh. drlg.
Universal Consd., No. 8 Montebello, Los Angeles Co.	5- 2-11	1,372	sd. sh. drlg.
Richfield Oil Co., No. 1 Montebello, Los Angeles Co.	5- 2-11	6,855	sd. sh. drlg.
Richfield Oil Co., No. 3 Montebello, Los Angeles Co.	5- 2-11	610	sd. sh. drlg.
North American, No. 2 Montebello, Los Angeles Co.	5- 2-11	6,302	cleaning out
St. Helens Pet. Co., No. 7 Montebello, Los Angeles Co.	5- 2-11	5,585	cmtd. 5,464
Keystone Oil Co., No. 1 Pico, Los Angeles Co.	9- 2-11	4,332	C.O. 4,310
General Pet., No. 46-D Santa Fe Springs, Los Angeles	6- 3-11	1,161	sd. sh. drlg.
General Pet., No. 137-F Santa Fe Springs, Los Angeles	5- 3-11	5,489	P.B. 5,305
Union Oil Co., No. 92 Santa Fe Springs, Los Angeles	31- 2-11	4,565	bailing
Union Oil Co., No. 21 Santa Fe Springs, Los Angeles	5- 3-11	2,990	sd. sh. drlg.
Bernstein, M. E., No. 1 Artesia, Los Angeles Co. ...	25- 3-12	5,888	redrlg. 4,290
McVicar & Rood, No. 1 San Jose Hills, Los Angeles Co.	6- 2-9	2,630	sd. sh. drlg.
Great Coastal Oil Co., No. 1 Elsinore, Riverside Co. ..	36- 5-5	2,510	hd. sd. drlg.
Commander Oil Co., No. 1 Newport, Orange Co.	29- 6-10	2,130	bailing
Hillman & Long, No. 1 Westminister, Orange Co.	14- 5-11	7,701	cmtd. 5,557
Five Point Oil Co., No. 1 Huntington, Orange Co. ...	36- 5-11	711	sd. sh. drlg.
West American Oil Co., No. 1 East Coyote, Orange Co.	24- 3-10	3,751	sd. sh. drlg.
Bartholomae Oil Co., No. 2 East Coyote, Orange Co. ..	24- 3-10	4,451	sd. sh. drlg.
Daly Oil Co., No. 1 East Coyote, Orange Co.	20- 3-9	2,230	sd. sh. drlg.
Union Oil Co., No. 22 Chapman Richfield, Orange Co.	30- 3-9	2,986	cmtd. 2,960
Union Oil Co., No. 29 Chapman Richfield, Orange Co.	30- 3-9	4,700	sd. sh. drlg.
Union Oil Co., No. 30 Chapman Richfield, Orange Co.	30- 3-9	516	sd. sh. drlg.
Union Oil Co., No. 31 Chapman Richfield, Orange Co.	30- 3-9	4,195	sd. sh. drlg.
Union Oil Co., No. 32 Chapman Richfield, Orange Co.	30- 3-9	3,403	swabbing
Placentia Dev. Co., No. 1 Placentia, Orange Co.	31- 3-9	4,520	redrlg. 3,460
Tehama Pet. Co., No. 2 Kraemer, San Bernardino Co.	33- 2-8	566	sd. sh. drlg.
Tehama Pet. Co., No. 3 Kraemer, San Bernardino Co.	3- 3-8	468	hd. sh. drlg.
Tehama Pet. Co., No. 4 Kraemer, San Bernardino Co.	32- 2-8	395	hd. sd. drlg.
Equitable Pet. Co., No. 1 Wildcat, San Bernardino Co.	11-10-5	2,398	hd. sd. drlg.

KANSAS

Week Ending June 27 (Descriptions are East unless marked otherwise)

Barber County

Sinclair Prairie Oil Co. No. 1 Gentry, NE cor. sec. 1-33-15w. R.U.R.

Barton County

F. E. Bailey et al No. 1 Hammeke, NE NE SW sec. 12-18-12w. Rig.

J. A. Brouk et al No. 1 Keil, SE SE NE sec. 11-16-15w. Drlg. 1,215 ft.

John Burton No. 1 Wendel, NE cor. sec. 13-19-11w. S.D. 63 ft.

Davison et al No. 1 Birzer, SW SE SW sec. 22-17-13w. Anhydrite 760 ft.; Topeka 2,770 ft.; S.D. 3,250 ft.

G. H. Rose and W. H. Lant No. 1 Redetzke, NE NW NW sec. 1-16-11w. S.D. 714 ft.

Rose Spring Drlg. Co. et al No. 1 Rick, SW cor. sec. 1-19-11w. Drlg. 2,740 ft.

Schermerhorn Oil Co. No. 1 Hunter, NE cor. sec. 29-18-15w. K.C. 3,194 ft.; La Motte; Juartzite 3,565-76 ft. T.D.; P.B. 3,534 ft.; gas gauged 30,000,000 ft.

Torry & Feaster No. 1 Feist, NE NE SE sec. 29-18-11w. Siliceous L. 3,430-32½ ft.; T.D.; potential; pumped 346 bbls. oil in 18½ hrs.

Wakefield & Johnson No. 1 Humm, SW SW NE sec. 33-19-12w. Anhydrite 665 ft.; drlg. 2,675 ft.

Butler County

Dalton et al No. 1 Miley, C SW NE sec. 17-27-5. Drlg. 350 ft.

Ellis et al No. 1-A Pettit, SE SE NW sec. 21-28-6. Siliceous 3,160-63 ft.; oil and water in hole.

McGinnis et al No. 1 Hinnen, NE NE SW sec. 18-24-4. Drlg. 2,355 ft.

Rex & Morris No. 1 Olson, NW SW SE sec. 15-28-6. S.D. 3,059 ft.

Ed Solomon No. 1 Church, SW NE SE sec. 8-28-5. S.D. 50 ft.

Clark County

Olson & Watchorn No. 1 Morrison, C SE SW sec. 17-32-21w. M.I.M.

Cowley County

Baden Prod. Co. No. 1 Sparks, SE SW NW sec. 35-33-4. Drlg. 3,156 ft.

DeGenther Oil Co. No. 1 Holt. NW NW SE sec. 15-30-5. Spd. and S.D.

W. M. McKnabb No. 1 Community, C NE NW sec. 14-34-3. S.D. 2,280 ft.

A. D. Morton et al No. 1 Roger, SE SE NE sec. 1-31-4. S.D. 1,230 ft.

Decatur County

Winkler & Koch No. 1 Veasey, C NW SE sec. 26-3-26w. Rig.

Edwards County

Stanolind O. & G. Co. et al No. 1 Donovan, C SE SE sec. 14-26-18w. Anhydrite 1,167 ft.; K.C. 4,028 ft. (cor.); drlg. 4,404 ft.

Ellis County

Albec Oil Co. No. 1 Union Pacific, NE cor. sec. 9-13-20w. Oswald 3,418 ft.; drlg. 3,555 ft.

Bradley Oil Co. et al No. 1 Penney-Wann, SE cor. sec. 13-15-20w. Anhy. 1,277 ft.; R.U.S.T. 3,341 ft.

Bridgeport Mch. Co. No. 1 Ubert, NE NE NW sec. 12-13-18w. Drlg. 640 ft.

James Brouk et al No. 1 Jacoba, NW NW SE sec. 31-15-16w. R.U.

Empire O. & R. Co. No. 1 Herl, SE cor. sec. 22-15-19w. Anhydrite 1,135 ft.; drlg. 2,625 ft.

Empire O. & R. Co. No. 1 Samuelson, NE NE SE sec. 31-11-16w. R.U.

Bridgeport Machine Co. et al No. 1 Madden Est., NE NW NW sec. 36-15-18w. Anhy. 1,150 ft.; Topeka 2,935 ft.; Oswald 3,260 ft.; acidized; pumped 152 bbls. in 6 hrs.

Harris & Haun et al No. 1 Schmeidler, SE SE SW sec. 3-13-17w. Oswald 3,274 ft.; T.D. 3,362 ft.; made potential 676 bbls.; comp.

Jones & Shelbourne No. 1 Gunther, SE SE SW sec. 9-11-19w. Drlg. 1,305 ft.

Jones Bros. & Carpenter et al No. 1 Solomon, SE SE SW sec. 28-11-19w. Anhydrite 1,408 ft.; Oswald 3,340 ft.; Siliceous 3,629 ft.; H.F.O. in 14 hrs.

Kansas Dev. Corp. No. 1 Haller, SE SE NW sec. 10-11-18w. Anhydrite 1,190 ft.; drlg. 1,510 ft.

Parrish & Denman No. 1 Walter, SE SW SE sec. 14-13-17w. Anhydrite 1,152 ft.; fsg. 3,295 ft.

Philhan Oil Co. No. 1 Gerstner, SW SW SE sec. 24-14-17w. Set 15-in. csg. 460 ft.

J. E. Trigg et al No. 1 Armbrister, SE SE SW sec. 6-11-19w. Anhydrite 1,517 ft.; drlg. 1,900 ft.

Twin Drlg. Co. No. 1 Copeland, NE NE SW sec. 26-14-19w. Anhydrite 1,350 ft.; La Motte sand 3,704-10 ft., T.D.; made pot. 410 bbls.; comp.

Twin Drlg. Co. et al No. 1 Schmidt, SW SW SE sec. 22-15-17w. R.U.

Vickers Pet. Co. No. 1 Kraus, SW SW NW sec. 22-14-19w. Anhy. 1,390 ft.; Oswald 3,420 ft.; set 8-in. csg. 3,444 ft.; R.U.S.T.

Wolf Creek Oil Co et al No. 1 Polifka, SW SW NE sec. 24-13-18w. R.U.

Ellsworth County

Roy Ramsey et al No. 1 Gregory, SW SW SE sec. 25-16-9w. Drlg. 1,005 ft.

York State Oil Co. No. 1 Koestle, NW NW SE sec. 12-17-9w. Drlg. 440 ft.

Finney County

Helmerich & Payne No. 1 Jones, C SE sec. 34-26-34w. Set 10-in. 645 ft.

Graham County

Noah & Young No. 1 Hills, NW SE SE sec. 19-10-21w. Rig.

Vickers Pet. Co. and Phillips Pet. Co. No. 1 Hutton, NE NE SE sec. 29-8-22w. Anhydrite 1,805 ft.; K.C. 3,473 ft.; drlg. 3,588 ft.

Greenwood County

Estes et al No. 1 Edgar, NW NW SE sec. 1-23-8. Fsg. 1,030 ft.

Ward McGinnis No. 1 Lampe, NW NE SW sec. 26-24-8. Set 8-in. csg. 1,400 ft.; C.O.

Guy Scott et al No. 1 Pedroja, SE NE SE sec. 6-26-10. Drlg. 250 ft.

Harper County

Marathon Oil Co. No. 1 Zellers, C SW NW sec. 17-35-8w. Wilcox sand 5,320 ft.; S.O. and gas, salty taste; T.D. 5,410 ft.: P.B. 4,400 ft.; whipstock 4,625 ft.; drlg. by, 5,056 ft.

Harvey County

Harburney Oil Co. No. 1 Schrag, NW NW SE sec. 24-22-3w. S.D. 2,907 ft.

Phillips Pet. Co. No. 1 Kaufman, NE NE NW sec. 2-22-2w. Set 15-in. csg. 157 ft.; W.O.C.

Haskell County

Helmerich & Payne et al No. 1 Larson, C SE sec. 28-28-33w. Rig.

Helmerich & Payne No. 1 Meredith, C SW sec. 10-30-33w. Loc.

Kuhn Bros. et al No. 1 Nilson, SW SW SE sec. 21-28-32w. Set 6-in. csg. 2,409 ft.; R.U.S.T.

Kingman County

D. R. Lauck et al No. 1 Prather, C SE sec. 18-27-8w. Chat 4,039 ft.; Viola 4,339 ft.; coring 4,360 ft.

W. C. McBride, Inc., No. 2-A Wooldridge, SW NE SE sec. 16-27-7w. Bldg. rig.

D. R. Lauck et al No. 1 Skilling, C E½ E½ SW sec. 33-27-8w. O.W.D.D.; drlg. 4,583 ft.

Oklahoma Oil Corp. et al No. 1 Reeves. NW cor. sec. 29-27-5w. Chat 3,740 ft.; Misener, 4,103 ft., fshg.

Meade County

Pacific Midwest Oil Co. No. 1 Rexford, NE SE SW sec. 8-20-29w. M.I.M.

McPherson County

Empire O. & R. Co. No. 1 Cunningham, SE cor. sec. 26-18-1w. Chat 3,803 ft.; T. D. 2,832 ft.; P. 27 bbls. in 5 hrs.; set 8-in. csg. 2,824 ft.

Hawkins et al No. 1 Ritikofer, NE NE SE sec. 2-20-10w. R.U.

T. C. Johnson, et al No. 1 A. R. Johnson, SW SW NW sec. 33-17-1w. H.F.W. 2,735-40 ft.

Ness County

Continental Oil Co. No. 1 Thompson, C E½ E½ SW sec. 13-18-26w. Siliceous and S.O. 4,446-50 ft.; T.D. 4,462 ft.; acidized; potential, 557 bbls.

Newton Dev. Co. No. 1 Tenny, NW NW SE sec. 19-18-25w. Drlg. 475 ft.

Pawnee County

Kessler & Their et al No. 1 Gustafson, SW cor. sec. 27-20-16w. R.U.R.

Reno County

Dickey Oil Co. No. 1-A Shepherd, NE NE NW sec. 22-26-9w. Chat 3,870 ft.; wtr., 4,161 ft.; P.B. 4,135 ft.; Simpson 4,237 ft.; drlg. 4,245 ft.; H.F.W.

Foraker et al No. 1 Hiett, SE SW NE sec. 34-24-4w. S.O. 2,874 ft.; H.F.W. 3,075 ft.; drlg. 3,135 ft.

Graham et al No. 1 Miller, NE NE SE sec. 36-25-10w. Rig.

Miller et al No. 1 Detter, NE SE NW sec. 28-22-7w. S.D. 570 ft.

Pryor & Lockhart et al No. 1 Kerr, C NW sec. 23-23-8w. R.U.

Rose Spring Drlg. Co. No. 1 Swansen, NE NE NW sec. 1-23-5w. Drlg. 3,057 ft.

Rice County

Beardmore et al No. 1 Fuller, SW SW SE sec. 23-18-7w. K.C. 2,777 ft.; Cong. 3,-111-89 ft.; Simpson 3,212 ft.; S.D. 3,343 ft.

Day No. 1 Mason, NW NE NE sec. 28-21-7w. Chat 3,388-3,400 ft.; T.D. 3,431 ft.; est. 20 B.P.D.

Gilmac Oil Co. No. 1 Sargent, SE cor. sec. 31-18-6w. T.D. 3,020 ft.; set 6-in. csg.

Gulf Oil Corp. No. 1 Steckel, SW cor. sec. 30-19-10w. Set 10-in. csg. 150 ft.

Permian Oil Co. No. 1 Monroe, C NE NE sec. 9-20-7w. Set 10-in. csg. 2,114 ft.; S.D. 2,605 ft.

Saco Oil Co. et al No. 1 Haxton Est., NW NW NE sec. 30-19-8w. Loc.

Sage et al No. 1 Patton, SW cor. sec. 5-21-7w. Spudded.

Shell Pet. Corp. No. 1 Gordon, C W half W half NE sec. 21-21-10w. Location.

Shell Pet. Corp. et al No. 1 Hafermann, C N½ N½ SE sec. 6-19-9w. Siliceous 3,192 ft.; T.D. 3,216 ft.; pumped 937 bbls. in 17¾ hrs.

Shell Pet. Corp. No. 1 Maughlin, NE NW SE sec. 11-20-8w. Siliceous 3,235-38 ft.; 36,500,000 ft. gas at 3,260 ft.; M.I. rotary.

Simpson & Noble et al No. 1 Pulliam, C S½ N½ NE sec. 35-19-8w. K.C. L. 3,-846 ft.; Viola 3,189 ft.; Simpson, 3,210 ft.; Siliceous 3,279 ft.; T.D. 3,305 ft.; gauged 41,000,000 ft. gas; M.I.R.

Simpson & Noble and Stanolind O. & G. Co. No. 1 Bowman, SW SW NW sec. 22-19-10w. Anhy. 438 ft.; Siliceous 3,286-94 ft.; saturated core; R.U.S.T.

Skiles et al No. 1 Stout, SE cor. sec. 6-21-9w. Siliceous 3,369 ft.; H.F.W. 3,374 ft., T.D.; D.&A.

Rooks County

Buckner & Schoff No. 1 McConnel, NE cor. sec. 34-6-18w. Ponds.

Hartman & Blair et al No. 1 Hall, NW cor. sec. 25-10-17w. Drlg. 960 ft.

Helmerich & Payne et al No. 1 Bedard, C NE sec. 29-9-19w. Set 7-in. csg. 3,530 ft.; R.U.S.T.

L. C. D. Drlg. Co. et al No. 1 Westhusin. C NE SE sec. 11-9-17w. S.D. 550 ft.

J. H. Lester No. 1 Methene, SE SE NE sec. 29-10-20w. S.D. 2,714 ft.

Murfin et al No. 1 Wasthusin, NE NE SE sec. 19-9-16w. C.O. 3,335 ft.

J. A. Shoemake No. 1 Stebbins, NE NE SW sec. 26-7-17w. Anhydrite 1,130 ft.; U.R. at 1,500 ft.

Skaer Oil Corp. et al No. 1 Dryden, NE cor. sec. 28-10-17w. Drlg. 3,277 ft.

Trees Oil Co. No. 1 Minx, SW cor. sec. 31-10-18w. Loc.

Rush County

Boyle & Grossman No. 1 Wilson, NE cor. sec. 33-17-19w. Drlg. 3,510 ft.

Ira Keith et al No. 1 Dartmouth Savings Bank, SW SW NE sec. 3-17-18w. Oswald 3,335 ft.; granite 3,633-65 ft.; D.&A.

National Ref. Co. No. 1 Werth, NW NE NE sec. 7-16-18w. Anhydrite 1,195 ft.; Oswald 3,328 ft.; T.D. 3,572 ft.; acidized; Pot. 444 bbls. oil, 2 per cent water; pumped 100 bbls. oil and 100 bbls. water third day; La Motte sand 3,624 ft.; H.F.W. 3,625 ft.; D.&A.

Pryor & Lockhart et al No. 1 Stegman, SW NW NE sec. 11-16-17w. Anhydrite 1,095 ft.; Siliceous 3,537 ft.; T.D. 3,550 ft.; P.B. 3,547 ft.

Russell County

Armer et al No. 1 Maier, NE NW NE sec. 20-15-14w. Anhydrite 840 ft.; drlg. 945 ft.

R. G. Berry et al No. 1 Cook, NE NE SE sec. 19-11-13w. Oswald 3,097 ft.; conglomerate 3,412 ft.; Chert 3,605 ft.; T.D. 3,635 ft.; D.&A.

Central Pet. Co. No. 1 Benso "C," SE SE SW sec. 9-14-15w. Granite 3,308-13 ft.; P.B. 3,120 ft.; pulled 5-in. csg.

Eisenhour & Shaffer No. 1 Humes, SW SW SW sec. 8-14-12w. Siliceous 3,376 ft.; T.D. 3,407 ft.; S.D.

Hartman & Blair No. 1 Johnston, NW cor. sec. 11-13-14w. Anhydrite 690 ft.; fsg. 2,023 ft.

Hartman & Blair No. 1 McAllister, SW SW SE sec. 24-13-15w. Anhydrite 940 ft.; Oswald 3,053 ft.; drlg. 3,130 ft.

Lario O. & G. Co. et al No. 1 Steinert, NE NE SW sec. 21-15-15w. Anhy. 875 ft.; drlg. 2,250 ft.

Lee & Reser No. 1 Penix, SW SW SE sec. 13-14-13w. Spudded.

R. C. Tarrant No. 1 Williamson, SE SE NW sec. 9-14-14w. Tarkio L. 2,515 ft.; T.D. 2,550 ft.; swbd. 5 B.P.H. and showing of wtr.; acidized with 1,000 gals.; made potential of 243 bbls. of oil.

Wakefield et al No. 1 Krug, NE NW SW sec. 7-15-14w. Anhydrite 845 ft.; Oswald 3,040 ft.; U.R. 6-in. csg.

Saline County

James Brouk et al No. 1 Othelander, NE NW SE sec. 10-16-3w. Spudded and S.D.

Ryan Consolidated Co. & Archer No. 1 Norton, NE cor. sec. 32-14-2w. M.I.M.

Sedgwick County

Joe Aylward et al No. 1 Harrison, SE SE SW sec. 23-25-2. Siliceous 3,330-45 ft.; D.&A.

D. R. Lauck No. 1 Parke, SE SE NE sec. 17-25-2. Siliceous 3,507-13 ft.; D.&A.

Earl Wakefield et al No. 1 Howard, SE SE NE sec. 25-25-2. Rig.

Seward County

Helmerich & Payne No. 1 Hyde, C SW sec. 14-31-34w. M.I.M.

Stafford County

C. H. Lebow et al No. 1 Wolk, SE SW NW sec. 3-21-12w. R.U.R.

Sumner County

Craft & Wilson No. 1 Nevitt, NE NW NE sec. 36-32-2e. Stalnaker 2,223 ft.; K.C. L. 2,608 ft.; S.D. 3,500 ft.

D. L. Husted et al No. 1 Evers, SE SE NE sec. 27-31-2. Set 12-in. csg. 413 ft.

Matthews & Derrington No. 1 Berry, NW NW SE sec. 14-35-1. Drlg. 3,578 ft.

Taylor & Lockhart et al No. 1 Knowles, SW cor. sec. 30-30-1. K.C. L. 2,558 ft.; Chat 3,499 ft.; (cor.); Siliceous 3,990 ft.; T.D. 4,031 ft.; D.&A.

E. B. Shawver No. 1 Judd, SW SE NE sec. 3-34-2. U.R. 2,215 ft.

Texas Co. No. 1 Reed, NE SE SE sec. 11-31-1w. R.U.S.T. 3,061 ft.

D. J. Wilson et al No. 1 Clark, 1,320 ft. from W and 25 ft. from S line of NW sec. 15-35-1w. Wilcox 4,394 ft.; S.D. 4,430 ft.

Trego County

Central Commercial No. 1 Wagg, NW NW SE sec. 17-13-21w. K.C. L. 3,548 ft.; bld. 10 bbls. oil in 8 hrs. at 3,950 ft.; S.D. 4,387 ft.

J. J. Hall et al No. 1 Deines, SE SE SE sec. 12-13-24w. U.R. 1,970 ft.

Woodson County

N. C. Dunn No. 1 Dawson, C NW NE sec. 27-26-13. L. 1,505 ft.; T.D. 1,527 ft.; P.B. 1,200 ft.; H.F.O.; no test.

Foster et al No. 1 Timm, SE NW NE sec. 36-25-13. Miss. 1,520 ft.; D.&A.

Lewis et al No. 1 Riggs, SW cor. sec. 10-26-14. Drlg. 1,115 ft.

C. L. Sheedy et al No. 1 Fuhlhage, NE NW SW sec. 27-25-14. Set 6-in. csg. 1,431 ft.

OKLAHOMA

Week Ending June 27

NORTHERN OKLAHOMA

Beckham County

Jo-Gail Drlg. Co. No. 1 Gilliland, C NE NE sec. 33-8-26w. R.U.

Cleveland County

Hall-Briscoe, Inc., No. 1 Fant, SW SW NE sec. 27-10-2w. S.D. at 7,511 ft.

Coal County

Carter Oil Co. and Magnolia Pet. Co. No. 1 James, SW NW SW sec. 35-1s-8. Wapanucka 660 ft.; drlg. 1,315 ft.

W. C. Mitchell No. 1 Quiett, NE NW SW sec. 35-1-8. Wapanucka 1,550 ft.; T.D 1,900 ft.; W.O.C.

Shell Pet. Corp. No. 3 Hill, SE SE NW sec. 30-3-10. Hunton 5,280 ft.; Sylvan 5,355 ft.; Viola 5,448 ft.; S.O. 5,640-57 sd. 6,275 ft.; T.D. 6,457 ft.; P.B. 4,-330 ft.; bailed to 2,350 ft., S.W.; gas est. 1,000,000 ft.

Sinclair Prairie Oil Co. No. 1 Culver, NE NE SW sec. 16-1-8. Drlg. 1,270 ft.

Garfield County

Herndon Drlg. Co. etal No. 1 Branson, SW SW SE sec. 23-24-3w. Drlg. 4,780 ft.

Earl McBride et al No. 1 Gage Est., SE SE NW sec. 27-22-3w. S.D. 1,380 ft.; sand 1,360-80 ft.; water.

W. J. Sherry et al No. 1 Haken, NW NW SW sec. 32-20-10w. Miss. L. 5,960 ft.; Viola 6,800 ft.; drlg. 6,865 ft.

Stanolind O. & G. Co. et al No. 1 Brunken, SW SW NE sec. 32-23-4w. Top Dense 5,915 ft.; Dolomite 5,935 ft.; first Wilcox 5,975 ft.; second Wilcox 6,033 ft.; H.F.W. 6,130-33 ft.; T.D. 6,133 ft. in sd.; R.U.R. to deepen.

Garvin County

Charles E. Carter et al No. 1 Wood, NW SW SE sec. 5-4-3. O.W.D.D.; sd. 2,973 ft.; Hunton 3,000 ft.; T.D. 3,018 ft.; 2,300 ft. fluid in hole; bailing.

C. A. Luttrell et al No. 1 Howell, NW SE NW sec. 34-1-1. Drlg. 70 ft.

McElreath & Suggett No. 1 Lasater, SE SE SW sec. 2-2-1w. T.D. 3,955 feet; S.D. for repairs.

Grady County

John Graham et al No. 1 Castleberry, SW SE NW sec. 8-5-7w. R.U. and S.D.

Art Holt et al No. 1 Ramsey, NE SE NE sec. 31-5-8w. Pits.

Ray Stevens No. 1 Mays, NE cor. sec. 1-3-8w. Drk.

Hughes County

Blackwell O. & G. Co. No. 1 Homahte, SW NE NE sec. 1-9-10. R.U.R.

Blackwell O. & G. Co. No. 1 Long, SE NE NW sec. 29-9-9. Sand 1,215-35 ft.; T.D. 1,695 ft.; C.O.

M. H. Halsey No. 1-A Eustep, NW NW SW sec. 11-8-9. Wapanucka 3,428 ft.; Cromwell 3,452 ft.; T.D. 3,454 ft.; 2 bailers wtr. an hr.; P.B. and shot 3,030-45 ft.; est. 10,000,000 ft. of gas; P.B. to 3,412 ft.; re-shot.

George Orr et al No. 1 Morgan, NE SE SW sec. 6-7-9. Cellar and pits.

Phillips Pet. Co. No. 1 Eberle, NE NE SW sec. 12-5-9. Wapanucka 3,887 ft.; Cromwell 4,268 ft.; Mayes 5,160 ft.; Woodford 5,230 ft.; Hunton 5,432 ft.; Sylvan 5,435 ft.; Viola 5,525 ft.; T.D. 5,540 ft.; drilled plug; 3,500 ft. fluid in hole; bailing.

Sinclair Prairie Oil Co. et al No. 1 Willy, SW cor. sec. 23-9-8. Calvin 1,505 ft.; S.D. for wtr. 3,025 ft.

Sivalls et al No. 1 Montgomery, NW SW NW sec. 7-9-9. Booch 2,950 ft.; Gilcrease 3,100 ft.; Cromwell 3,470 ft.; drlg. 3,475 ft.

Johnston County

Shell Pet. Corp. No. 1 Illinois Bankers Life, NW SE NE sec. 10-2s-7e. Drlg. 225 ft.

Kay County

W. O. Allen No. 1 Fulton, SE cor. sec. 18-27-4. Drlg. 1,675 ft.

Kiowa County

Hendershot & Wilson No. 1 Parrish, SE SE NW sec. 3-6-15w. Drlg. 230 ft.

E. A. De Bolt et al No. 1 Burnett, NW SE NE sec. 30-7-20w. Pits.

Le Flore County

McCraw et al No. 1 Tidwell, C NW SE sec. 17-3-22. Set 10-in. csg. 1,560 ft.; T D. 1,750 ft.; rep. rig.

Lincoln County

Amerada Petroleum Corp. et al No. 1 Zimmerman, SW SW NE sec. 10-12-5. T.D. 4,358 ft.; set 8-in. csg.

Mid-Continent Pet. Corp. and Texas Co No. 1 Hillman, SW SE NE sec. 29-13-6. Drlg. 3,670 ft.

Skelly Oil Co. No. 1 Sporn, NW NE SW sec. 21-17-3. Bldg. rig.

Logan County

W. N. Anthony and H. G. Marshall No. 1 Fruin-Eckman, SE SE SW sec. 4-16-1. T.D. 5,285 ft.; P.B. 5,181 ft.; swdg. pipe.

McClain County

Arab Pet. Corp. No. 1 Autry, NW cor. sec. 16-7-3w. T.D. 8,775 ft.; pulling pipe to plug.

McCurtain County

Louis Sikes No. 1 Mitchell, C NW SW sec. 12-9s-26. Spudded and S.D. for 30 days.

McIntosh County

S. E. Dieckman No. 1 K. McIntosh, SE cor. sec. 4-12-17. Drlg. 905 ft.

Indian Ty. Ill. Oil Co. No. 1 Tancred, 1-050 ft. S and 390 ft. E of C sec. 9-9-14. Wilcox 4,525 ft.; T.D. 4,536 ft.; P.B. 2,-731 ft.; 1,000,000 ft. gas; comp.

Noble County

Stanolind O. & G. Co. and Amerada Pet. Corp. No. 1 Gillham, NE SE SE sec. 14-22-1. Drlg. 1,100 ft.

Okfuskee County

Champlin Ref. Co. No. 1 Thompson, SW SW NW sec. 7-13-8. T.D. 1,147 ft.; abd.

Oklahoma County

I. D. O'Shaughnessy, Inc. No. 1 Berlowitz, SE SW NE sec. 9-12-3w. Drlg. 4,725 ft.

H. R. Hollenback et al No. 1 Cooper, NW NW NE sec. 15-11-1. Oswego, 5,435 ft. Hunton 5,857 ft.; Sylvan 5,998 ft.; Viola 6,093 ft.; Simpson 6,133 ft.; first Wilcox 6,232 ft.; second Wilcox 6,340-60 ft.; S.D. 6,375 ft.

Osage County

Gray & Folson No. 1 Osage, SW SW NE sec. 33-25-7. Drlg. 1,945 ft.

Stoner Bros. No. 1 Osage, NW NE SW sec. 18-22-8. Drlg. 550 ft.

Payne County

Amerada Pet. Corp. and Stanolind O. & G. Co. No. 1 Pratt, SE cor. sec. 29-19-5. Misener 3,657 ft.; 2,000,000 ft. of gas; S.O.; Viola 3,671 ft.; T.D. 3,685 ft.; gas est. 10,000,000 ft.; to kill gas and deepen.

Denver Producing & Ref. Co. et al No. 1 Pratt, NW cor. sec. 20-18-3. Bartlesville 4,095 ft.; water 4,165 ft.; T.D. 4,175 ft. D.&A.

Pittsburg County

Okla. Dist. Oil Co. No. 1 Beeler, NE NE SW sec. 7-7-14. R.U.R.

Pontotoc County

Selby O. & G. Co. No. 1 Sands, NE NE NE sec. 20-3-5. T.D. 1,876 ft.; U.R.

Southard & Miller No. 1 Wilson, NW SE SW sec. 26-4-5. Spudded and S.D.

Pottawatomie County

J. L. Shaw No. 1 Illinois Life, NW SE NW sec. 1-4-5. Drlg. 1,590 ft.

Wofford Bros. No. 1 Sewell, SW SW SE sec. 14-7-3. Rig.

Seminole County

Ark Royalty Co. No. 1 Kiker, SE SE NE sec. 9-10-7. Drlg. 2,947 ft.

J. E. Crosbie, Inc., and Blankenship & Quiett No. 1 Biggers, C N½ N½ NE sec. 30-6-8. Drlg. 2,110 ft.

Felmlee & Nichaelson No. 1 Belford, SE NW NE sec. 15-9-8. Sd. 1,460-1,505 ft.; S.O.&G.; S.D. 1,680 ft.

Rudco O. & G. Co. No. 1-A Butner, NE NE SW sec. 15-9-8. Drlg. 900 ft.

Tom Phillips & Kinrow Drlg. Co. No. 1 Cheparney, SE SE NW sec. 7-6-7. Drlg. 3,065 ft.

Twin State Oil Co. No. 1 Hamm, SW SE SW sec. 24-10-7. Coring 3,435 ft.

Washita County

L. P. McWhirter No. 1 fee, SW cor. sec. 34-8n-19w. T.D. 1,497 ft.; S.D.

SOUTHERN OKLAHOMA

Atoka County

D. Malarnee et al No. 3-A DOK ranch, SE cor. sec. 35-2s-13e. O.W.D.D.; T.D. 3,482 ft.; U.R. 8-in. csg.

Phelps & Coats et al No. 1 Fidelity Life Ins. Co., SE SW NW sec. 23-1s-12. T.D. 750 ft.; S.D. for casing.

Prairie Investment Co. No. 1 A. Cobb, SW NE NW sec. 19-3s-11e. Viola, 30 ft.; drlg. 315 ft.; H.F.W.

Carter County

Carter Oil Co. et al No. 1 Leon Voorhees, C SE SW sec. 34-5s-2w. Drlg. 6,955 ft.

W. E. Hammond No. 1 J. Rile, SW SE SE sec. 8-5s-1e. T.D. 475 ft.; S.D.

Cotton County

English Drlg. Co. No. 1 Wilson, NW NW SE sec. 7-4s-11w. T. D. 1,514 ft.; S.D.

Harmon County

Lloalko Trust, Ltd. No. 1 Cosmos, SE SE SW sec. 14-3n-25w. T.D. 2,870 ft.; S.D. for D.P.

Jackson County

C. P. Burnham No. 1 Oliver, NW NW SE sec. 26-1-20w. Granite Wash 1,912 ft.; S.O.; drlg. 2,060 ft.

W. A. Delaney No. 1 Mock, C NE SW sec. 32-1n-20w. T.D. 190 ft.; W.O.C.

A. H. Jackman No. 1 fee, SW SW SW sec. 27-1s-24w. T.D. 2,685 ft.; fsg.

J. Ben Russell No. 1 Daniel, NW NE SE sec. 13-3-20w. Drlg. 850 ft.

Universal Oil Co. No. 1 R. W. Briscoe NW SW NE sec. 36-1s-20w. T.D. 3,004 ft.

Jefferson County

A. T. Campbell No. 1 Trout, SE NE NE sec. 6-8s-7w. Sd. 1,525-57 ft.; T.D. 1,-202 ft.; S.D. for csg.

Pearson et al No. 1 Douthitt, NE cor. sec. 24-6s-9w. T.D. 2,202 ft.; S.D.

Johnston County

Equitable O. & G. Co. No. 1 Belisey, NE SW sec. 12-2s-4e. Arbuckle L. 1,552 ft.; drlg. 1,938 ft. in L.

Love County

Amerada Pet. Corp. No. 1-A Westheimer & Daube, SW SE SW sec. 27-6s-2e. T.D. 7,363 ft.; P.B. 2,970 ft.; swabbed 26 bbls. in 24 hrs.

W. H. Riddle et al No. 1 Johnson, C SW SE sec. 20-8s-2w. Location.

J. B. Russell et al No. 1 Scott, SW SE SW sec. 29-8s-2e. T.D. 4,968 ft.; taking down tools.

Sinclair Prairie Oil Co. No. 1 Stockton, SE SE SW sec. 26-6s-2w. Drlg. 3,376 ft.

Marshall County

Helmerich & Payne No. 1 Taliaferro, NW SE SW sec. 26-5s-5e. T.D. 2,760 ft.; P.B. 1,350 ft.; drlg. 1,950 ft.; hole off 4 per cent.

Sherril & Rounds No. 1 Taylor, SW NE NE sec. 30-7s-7e. Machine.

Pushmataha County

C. W. Whitehead et al No. 1 Misser, SE SW SW sec. 35-3s-18e. T.A.; T.D. 5,-560 ft.

Stephens County

W. G. Endicott et al No. 1 McFatridge, NW NW SW sec. 11-3s-9w. T.D. 1,452 ft.; fsg.

T. H. McCasland No. 1 J. C. Parker, NE NE SW sec. 2-1n-6w. S.D. 2,518 ft.

Ed Parson No. 1 Olson, C SW SW sec. 21-2n-8w. Location.

Tillman County

Rochelle Bernheimer No. 1 Tate, NE NE NW sec. 16-1s-19w. Drlg. 912 ft.

Gulf Oil Corp. et al No. 1 McWilliams, NW SW SW sec. 15-3s-17w. Drlg. 3,355 ft.

Gulf Oil Corp. No. 1 Wearmouth, SE NW SE sec. 31-1s-18w. Drlg. 4,918 ft.

Johnson, Young & Mitchell No. 1 Donahoe, SW NW NW sec. 7-4s-17w. Drlg. 2,640 ft.

Shirley, Cium et al No. 1 Moricle, NW NW SE sec. 16-4s-14w. T.D. 1,331 ft.; S.D.

D. S. Smith No. 1-A Hammill, NE NE NW NW sec. 6-5s-15w. Drlg. 1,778 ft.

ARKANSAS

Bradley County

Phillips Pet. Co. No. 1 C. H. Murphy et al, NW cor. NW NW sec. 12-17-11. Cg. 2,440 ft.

Calhoun County

Ben G. Barnett No. 1 Freeman Smith, SE cor. sec. 36-15-14. Top Oolitic l. 4,885 ft.; Cg. sdy. sh. and l. 4,910 ft.

T. R. Brown et al No. 1 Calion Lbr. Co., C S½ SE SW sec. 22-15-15. Drlg. 3,366 ft.

Hempstead County

Dixie Drlg. Co. No. 1 Wheatley, 330 ft. S, 30 ft. E, NW cor. SW NE sec. 14-11-26. R.U. and W.O.O.

M. D. Fitzwater No. 2 Lafferty, sec. 17-14-24. S.D. at 2,415 ft.

H. D. Easton et al No. 1 Conway-Tiller, sec. 20-12s-27w. T.D. 2,780 ft.; cored sd. with oil and asphalt showings.

LaFayette County

Erwin & Leach No. 3 Bodcaw Lbr. Co., 330 ft. S and E, NW cor. sec. 20-16-13. T.D. 7,707 ft. Oolitic lime 7,654-98 ft. D.S. test 7,626-98 ft., 24 thribbles s.w. in 12 min. No oil or gas. W.O. P.B. to 3,600 ft. Perf. casing 3,525-50 ft. and will test.

A. M. Neeley No. 1 Meek, 330 ft. S and W, NE cor. NE NW sec. 35-19-25. R.U.

Little River County

Roberts et al No. 1 Hall, sec. 22-13-30. O.W.D.D.; S.D. at 2,050 ft.

Loanoke County

Frank F. Silver et al No. 1 Joe Chambers, C NE sec. 17-2n-7w. T.D. 1,470 ft. S.D.

Miller County

Deep Rock Oil Corp. No. 1 Williams, NW cor. SW NW sec. 6-16-25. Drlg. 4,106 ft.

King Oil Corp. No. 1 G. W. Crank, SW NE sec. 19-26-25. T.A. 3,906 ft.

King Oil Corp. No. 1 Mann, NW cor. NW SE sec. 2-16-26. Drlg. and cg. 1,611 ft.

Odell Hinson No. 1 Montana Realty Co., 330 ft. S and W NE NW NW sec. 3-17-28. Drlg. 1,160 ft.

Ouachita County

Armstrong-Rhoda No. 1 M. Bragg, SE cor. SE NW sec. 25-13-18. Cg. 1,350 ft.

Carnes & Harrell No. 1 Dunn & Robinson, new loc., 440 ft. S, 440 ft. E, NW cor. NW SE sec. 7-12-19. T.D. 2,415 ft. cor. depth); S.D.; W.O.

J. E. Crosbie No. 16 Sewell, C W½ SW NE sec. 35-15-15. Drk.

J. M. Farriss No. 1 Dean, NE SE NW sec. 16-15-17. Old T.D. 2,907 ft.; prep. to D.D.

M. Edw. Jones No. A-1 Reynolds, C W½ SW SW sec. 27-15-15. Digging pits.

M. Edw. Jones No. A-2 Reynolds, C E½ SW SW sec. 27-15-15. Clearing location.

M. Edw. Jones No. 1 Ephram Murphy heirs, C E½ NE NE sec. 28-15-15. Loc.

M. Edw. Jones No. 3 Ephram Murphy heirs, C E½ NW NE sec. 28-15-15. Loc.

Lion Oil Ref. Co. No. 1 Reynolds, C E½ SE NE sec. 28-15-15 . D.S. test 4,795-4,820 ft.; est. 35,000,000 ft. gas, 195 ft. S.W., 3½ min.; W.O.

L. L. McDonald No. 1 Langley, 330 ft. N and E, SW cor. NE SW sec. 19-15-15. S.D. 2,116 ft.

Phillips Pet. Co. No. 1 Arnold, 660 ft. S and 330 ft. E, NW cor. NE sec. 27-15-15. Drlg. 4,750 ft.

Phillips Pet. Co. No. 1 Cheatham, 660 ft. N and 330 ft. E, SW cor. NE sec. 27-15-15. Drlg. 4,873 ft.

Phillips Pet. Co. No. 1 J. M. Farriss, cen. W½ NW SE sec. 27-16-15. R.U.

Phillips No 1 E. Gette, 660 ft. N and 330 ft. E, SW cor. NE sec. 27-15-15. Drlg. 3,586 ft.

Phillips Pet. Co. No. 1 L. Harriss, 660 ft. N and 330 ft. W, SE cor. SW NE sec. 28-15-15. T.D. 4,769 ft.; hole clean; conditioning mud.

John Pugh No. 1-A P. T. Hildebrand, 660 ft. N and 330 ft. W, SE cor. sec. 28-15-15. T.D. 4,914 ft.; cmt. 7-in. 4,904 ft.; W.O.C.S.

Standard Oil Co. of La. No. 3-B Reynolds, 660 ft. N and 330 ft. W, SE cor. NW SW sec. 27-15-15. T.D. 4,912 ft.; flw. est. 6,000,000 ft gas and 85 bbls. oil, 24 hrs., 6% mud, through 1¾-in. ck.; testing.

O. F. Whittaker, Tr., No. 1 S. Howard, 600 ft. E and 150 ft. N, SW cor. NW NE sec. 20-12-16. Drlg. 2,490 ft.

Union County

Ark.-Southern Oil Co. No. 1 M. H. Simmons, NW cor. NW NE sec. 15-18-13. Drk.

J. C. Buckbee No. 2 Ezzell, SW cor. NE NW sec. 13-17-15. Cg. 4,839 ft.

J. E. Crosbie, Inc., No. 6 Sullivant, 560 ft. E, 300 ft. N, SW SE NW sec. 13-17-14. Drlg. 816 ft.

Kinnebrow & Simpson No. 1 L. Adams, SW cor. NE NE sec. 13-17-14. T.D. 3,172 ft. T.A.

Marine Oil Co. No. 1 Simmons, 250 ft. S and W, NE cor. SE NW sec. 19-18-13. Drk.

McCressien Oil Co. No. 2 D. Norman, NE cor. NE SE sec. 3-18-13. W.O. jack to pump, 3,556 ft.

LOUISIANA

NORTH LOUISIANA PROVEN

Caddo-Rodessa

American Lib. O. Co. No. 1 Norton, 330 ft. S and 330 ft. W, NE cor. sec. 17-25-15. 16-in. 162 ft.; drlg. 5,632 ft.

Ark.-La. Gas Co. No. 13 Rodessa O. & L. Co., 2,330 ft. N and 1,136 ft. W, SE cor. sec. 22-23-16. T.D. 5,996 ft.; 7-in. cmtd. 5,970 ft.; W.O.C.S.

Ark.-La. Gas Co. No. 17 Rodessa O. & L. Co., SE cor. SW NW sec. 23-23-16. Comp. Flowed 22 bbls. per hr., ½-in. tbg. ck.; C.P. 900 lbs.; T.P. 500 lbs.; T.D. 5,990 ft.

Ark.-La. Gas Co. No. 18 Rodessa O. & L.

Co., NW cor. sec. 23-23-16. T.D. 5,994 ft.; cmtd. 7-in. 5,963 ft.

Ark.-La. Gas Co. No. 19 Rodessa O. & L. Co., NE cor. NE SE sec. 22-23-16. Drlg. 5,290 ft.

Ark.-La. Gas Co. No. 20 Rodessa O. & L. Co., NW cor. SW sec. 23-23-16. Drlg. 4,175 ft.

Ark.-La. Gas Co. No. 21 Rodessa O. & Ld. Co., 296 ft. N, 330 ft. E SW cor. sec. 23-23-16. R.U.

Ark.-La. Gas Co. No. 22 Rodessa O. & Ld. Co., 330 ft. S and 328 ft. W, NE SE NE sec. 23-23-16. Drlg.

Blackwell O. & G. No. 2 Neugent, 330 ft. S and 330 ft. E NW cor. NE SE sec. 8-23-15. Drlg. 5,110 ft.

S. P. Borden No. 3 K.C.S., NW cor. SW sec. 23-23-16. Drlg. 4,984 ft.

Canadian Oil Co. No. 1 Comegys, SE cor. sec. 10-23-16. T.D. 8,022 ft.; fsg. for reamer.

Haynes Prod. Co. No. 7 Otwell, 330 ft. N and E, SW SE SE sec. 15-23-16. 13-in. 259 ft.; 9-in. cmtd. 2,090 ft.; W.O.C.S.

Haynes Prod. Co. No. 8 Otwell, 400 ft. S and 280 ft. E, NW SE SE sec. 15-23-16. 13-in. 268 ft.; 9-in. cmtd. 2,077 ft.; W. O.C.S.

Lacey et al No. 2 Tyson, 487 ft. S, 789 ft. W, NE SE NW sec. 24-23-16. T.D. 2,132 ft.; cmtd. 10-in.; W.O.C.S.

R. W. Norton No. 3 Atkins Unit, 175 ft. S, 1,386 ft. W, NE cor. sec. 18-23-16. T.D. 6,042 ft.; cmtd. 6-in. 6,025 ft.; W. O.C.S.

R. W. Norton No. 4 Atkins Unit, 330 ft. N and 441 ft. E, SW SE sec. 7-23-15. Loc.

R. W. Norton No. 5 Atkins Unit, 660 ft. S and E, NW NW NE sec. 18-23-16. Loc.

R. W. Norton No. 2 Elder, 330 ft. S and W, NE cor. sec. 23-23-16. T.D. 6,064 ft.; 6-in. cmtd. 6,046 ft.; W.O.C.S.

R. W. Norton No. 3 Foscue Unit, NE cor. sec. 29-23-16. T.D. 5,970 ft.; 6-in. cmtd. 5,948 ft.; W.O.C.S.

R. W. Norton No. 4 Foscue Unit, SE cor. sec. 20-23-16. Core bbl. stuck. Clr. oil and acid. T.D. 5,938 ft.

R. W. Norton No. 6 Foscue Unit, 656 ft. N and W, SE cor. of Foscue tract, sec. 20-23-16. Loc.

R. W. Norton No. 5-A Caddo Lv. Bd., 2,-600 ft. N and 600 ft. W, C sec. 28-23-16. Drlg. 4,012 ft.

R. W. Norton No. 6-A Caddo Lv. Bd., 2,-**600 ft. N and 660 ft. W, C sec. 28-23-16.** T.D. 5,982 ft.; cmtd. 6-in. 5,934 ft.; W. O.C.S.

R. W. Norton No. 2 Slattery, 1,990 ft. S, 656 ft. E, NW cor. sec. 28-23-16. Loc.

R. W. Norton No. 2 N. S. Spearman, 330 ft. S and 660 ft. E, NW cor. SW sec. 18-23-15. Drlg. 5,871 ft.

R. W. Norton No. 4 Tyson heirs, 2,943 ft. N and 2,313 ft. E, SW cor. sec. 13-23-16. Comp.; flowed 22 B.P.H., ¼-in. tbg. ck.; T.P. 1,000 lbs.; C.P. 1,200 lbs.; 3,000 gals. acid through perf. csg. 6,075-76 ft.; T.D. 6,095 ft.

R. W. Norton No. 5 Tyson heirs, 1,155 ft. N, 165 ft. W, SE cor. NW¼ sec. 13-23-16. R.U.

Phillips No. 3 Adams, 315 ft. S and 1,707 ft. E, NW cor. sec. 17-23-16. Drlg. 3,039 ft.

Phillips Pet. Co. No. 5 Norton Est., SW cor. NW sec. 17-23-15. T.D. 6,060 ft.; will cmt. 7-in.

Phillips No. 6 Norton Est., 1,664 ft. E and 1,794 ft. S, NW cor. sec. 17-23-15. Drlg. 3,842 ft.

Phillips Pet. Co. No. 1 Robinson, C E½ NE SE sec. 18-23-15. Drlg. 5,005 ft.

Phillips No. 1 J. T. Smith, 330 ft. S and 330 ft. W NE cor. SW SE sec. 3-23-15. Drlg. 3,710 ft.

Regent Oil Corp. No. 1 Tyson, 104 ft. S, 104 ft. E NW cor. SE SW sec. 24-23-16. Drlg. 5,152 ft.

H. W. Snowden No. 1 Phillips, C Lot 11, Blk. 36, sec. 23-23-16. Drlg. 5,478 ft.

Snowden No. 2 Phillips, cen. Lot 1, Blk. 47, Townsite, sec. 23-23-16. Loc.

H. W. Snowden No. 8 Phillips, C Lot 7, Blk. 47, Townsite, sec. 23-23-16. Drlg. 3,-738 ft.

Snowden & Anding No 1 Taylor, C Lot 7, Blk. 46, Townsite, sec. 23-23-16. Reaming hole 1,602 ft.

Standard Oil Co. of La. No. 5 J. Caldwell, 330 ft. S and W, NE cor. SW SE sec. 12-23-16. Drlg.

Standard No. 16 Lawton, NE cor. SW NW sec. 14-23-16. T.D. 6,009 ft.; 7-in. cmtd. 5,993 ft.; W.O.C.S.

Standard No. 17 Lawton, 100 ft. N and 764 ft. W, SE cor. NW sec. 14-23-16. Drlg. 5,616 ft.

Standard No. 4-A M. L. Pitts, 330 ft. N and W, SE sec. 11-23-16. Would not flow; acidized 3,000 gals.; W.O.; T.D. 6,-022 ft.

Simplex Oil Co. No. 3 Natalie, 1,175 ft. N and 200 ft. W SE cor. W½ SE¼, sec. 10-20-15. Cmtd. 6-in. 3,205 ft.; W. O.C.S.

Tri-State O. & G. Co. No. 1 Hall, C Lot 12, Blk. 29, sec. 23-23-16. Drlg. 5,987 ft.

Tri-State O. & G. Co. No. 1 F. L. Westbrook, C Lot 6, Blk. 12, sec. 23-23-16. T.D. 6,027 ft.; 7-in. cmtd. 5,997 ft.; W.O. C.S.

United No. 6 Brewer Unit, 1,094 ft. N and 569 ft. E, SW cor. sec. 22-23-16. Drlg. 5,248 ft.

United No. 3 Harris, NE cor. sec. 15-23-16. Cg. 5,950 ft.

United No. 4 Miller, sec. 14-23-16. T.D. 6,017 ft.; 7-in. cmtd. 6,000 ft.; W.O.C.S.

United No. 2 Mitchell, SW cor. of lse., sec. 20-23-16. T.D. 6,010 ft.; 7-in. cmtd. 5,992 ft.; W.O.C.S.

United No. 5 M. L. Pitts, 313 ft. N and 458 ft. W, SE cor. NW SE sec. 13-23-16. Csg. seat gave way; cmtd. blk. 5,990 ft.; T.D. 6,040 ft.; comp.; flw. 16 bbls. per hr. through ¼-in. ck.; 1,500 gals. acid; T.P. 500 lbs.; C.P. 300 lbs.

United No. 7 Pitts, NE cor. SW SW sec. 13-23-16. Comp. flw. 16 B.P.H. on ¼-in. tbg. choke, 1,500 gal. acid. T.D. 6,095 ft.

United No. 8 Pitts, SW cor. of E 28 ac., NE SW sec. 15-23-16. Drlg. 5,779 ft.

United Gas No. 9 M. L. Pitts Unit, 113 ft. N, 111 ft. W, SE SW SW sec. 13-23-16. Drlg. 3,030 ft.

United Gas No. 4 N. S. Spearman Unit, 659 ft. S, 650 ft. W, NE NW sec. 18-23-15. Drlg. 2,799 ft.

United Gas No. 1 Teamer, 133 ft. S, 111 ft. E, NW NE NW sec. 24-23-16. 13-in. 231 ft.; W.O.C.S.

United Gas No. 6 Thomas Unit, 319 ft. N, 329 ft. E, SW NE NW sec. 23-23-16. Drlg. 4,782 ft.

United Gas No. 8 Thomas Unit, 70 ft. SE and 148 ft. NW at right angle to NE cor. Lot 1, Blk. 7, sec. 23-23-16. R.U.

United Gas No. 23 Rodessa O. & L. Co., 319 ft. N, 423 ft. W, SE NW NW sec. 23-23-16. Drlg. 3,279 ft.

United Gas Pub. Ser. Co. No. 2 U. S. Govt., 660 ft. S and 1,166 ft. E, NW cor. of 54-ac., sec. 29-23-16. Drlg. 5,-882 ft.

United Gas No. 574-1 fee, 660 ft. N and W, SE cor. sec. 16-23-16. 13-in. 313 ft.; drlg. 3,345 ft.

Grady Vaughn No. 2 Hunter-Derryberry, sec. 14-23-16. T.D. 6,024 ft. Cutting out stk. baller.

Sabine Parish—Zwolle

Ellis Prod. Co. No. 1 Williams, 330 ft. S and W, NE cor. SE NE sec. 23-7-11. Tested dry; S.D.; W.O. 2,806 ft.

N. LOUISIANA WILDCATS

Bienville Parish

J. W. Leonard No. 1 Courtney, 330 ft. N and W, SE cor. sec. 5-17-7w. Drk.

Rondeau et al No 1 Locke, 150 ft. S and 1,495 ft. W, NE cor. sec. 9-15-10. Drk.

A. C. Walters No. 1 D. B. Davis, C SE SW sec. 3-16-9w. Drk.

Bossier Parish

Geo. H. Bringhurst et al No. 2 Buckley, 1,000 ft. N, 330 ft. W, SE cor. sec. 35-21-13. R.U. and S.D.

Producers O. & G. Co. No. 1 Webb, C W½ SW sec. 22-17-12. Drlg. 3,639 ft.

Tidwell et al No. 1 Nattin, 200 ft. S and W, C sec. 15-22-14. Set 10-in. 66 ft.; S.D. 1,650 ft.

Triangle Drlg. Co. No. 1-E Skannal, 660 ft. N and 3,640 ft. W, SE cor. sec. 23-17-13. Drlg. 3,306 ft.

United Gas Pub. Ser. Co. No. 1-D H. L. Skannal, 660 ft. S, 561 ft. W, NE cor. SE sec. 22-17-12. Drlg. 4,419 ft.

Caddo Parish

Calatex O. & G. Co. No. 2 Scott, 1,038 ft. W, 807 ft. N, SE cor. sec. 5-16-16. T.D. 2,979 ft.; cmt. 4-in.; W.O.C.S.

Calatex O. & G. Co. No. 2 Hudson, 1,319 ft. N and 913 ft. E, SW cor. sec. 5-16-16. Drk.

Calatex O. & G. Co. No. 1 Whitworth, 700 ft. S and 860 ft. E, NW cor. SW¼ sec. 10-16-16. R.U.

R. E. Dalton No. 1 Noel Est., SW cor. SE SE sec. 4-21-14. Drlg. 621 ft.

Falcon Oil Co. No. 15 Deckson, NW SE sec. 27-20-15. Pumped S.W. only; abnd.

Hillman et al No. 2 Noel Est., 530 ft. S and 330 ft. W, NE cor. sec. 12-20-16. T.D. 2,171 ft.; prep. set csg.

J. B. Hutchinson No. 2 Storey-Phillips, SW cor. NE NW sec. 28-16-13. Drk.

Bill Morefield et al No. 1 Stokely, 745 ft. S and 100 ft. E, C sec. 5-20-16. R.U.

Morris & Wooley No. 1 Pender, NW cor. SW sec. 11-20-15. T.D. 2,207 ft.; will run 6-in.

Persian Oil Co. No. 1 J. E. Cupples, 500 ft. S and 350 ft. W, NE cor. sec. 24-16-13. Drk.

Prairie River Synd. No. 1 Hutchinson, 330 ft. N and E, SW NW sec. 15-15-12. R.U.

Simplex Oil Co. No. 10 Glasswell, sec. 10-20-15. T.D. 2,200 ft. Pumped 50 B. P.D. Comp.

Sport Oil Corp. No. 1-D Muslow, SE cor. sec. 5-20-15. Cg. 3,800 ft.

Stanolind O. & G. Co. No. 102 Dillon, 330 ft. S and W NE cor. sec. 14-21-15. T.D. 1,699 ft.; 6-in. cmt.; W.O.C.S.

United Gas No. 1-A S. R. Wheeler, 1,320 ft. S, 1,500 ft. W, NE cor. sec. 16-18-16. Old T.D. 5,200. Will D.D.

Caldwell Parish

Critchett & Woods No. 1 Kyles, NE cor. **SW NE sec. 18-11-3e. P.B. to 1,300 ft.;** old T.D. 1,740 ft.; W.O.O.

Critchett & Woods No. 2 La. Cen. Lbr. Co., NW cor. NW SE sec. 18-11-3e. T.D. 1,395 ft.; S.D.

Zelgen No. 6 La. Cen. Lbr. Co., sec. 18-14-3e. Cg. 1,600 ft.

Catahoula Parish

J. Ray McDermott No. 1 La. Cen. Lbr. Co., 400 ft. S and E, NW cor. sec. 15-10-5e. Drlg. 2,326 ft.

Claiborne Parish

S. E. Langford et al No. 1 White, cen. S½ NE SW sec. 26-21-8. R.U.

E. T. Oakes No. 1 H. W. Patton, NE cor. sec. 1-20-5. Reaming 4,265 ft.

United Gas Public Service Co. No. 2 Durfett, 660 ft. N and 1,980 ft. E, SW cor. sec. 31-20-5. T.D. 7,662 ft. Fishing 450 ft. of drill pipe.

Concordia Parish

Zeni Oil Co. No. 1 Young, 1,200 ft. W, 100 ft. N, SE cor. sec. 24-4n-8e. S.D. 1,120 ft.

De Soto Parish

J. E. Carlson No. 1 A. P. Garland, 250 ft. S and E, NW cor. SW sec. 7-14-14. R.U.

J. G. Carson No. 1 C. J. McMichael, sec. 26-13-15. Drk.

W. F. Hyde et al No. 1 Ramsey, 330 ft. N and W, C sec. 36-11-11. S.D. for water; T.D. 965 ft.

R. C. Payne No. 1 Harris, sec. 11-13-14. T.D. 1,700 ft. Fish drl. stem.

E. A. Stiller No. 1 Jenkins, 400 ft. S and 200 ft. W, NE cor. NW NE sec. 35-13-12. T.D. 2,490 ft. W.O.S.R.

Grant Parish

Acadian Prod. Corp. No. 3 Swope, 150 ft. S and E, NW cor SE SE sec. 18-9-1e. T.D. 1,581 ft.; set perf. 6-in.; comp.; pumped 20 bbls. per day.

Acadian Prod. Corp. B-2 Swope, 330 ft. S of No. 7, sec. 18-9-1e. Drk.

Alexander et al No. 1 Maxwell, sec. 9-9-1e. W.O.S.R. 1,538 ft.

Fred W. Hensiee No. 2 Urania, sec. 7-10-1e. Comp. pump 10 B.P.D. T.D. 1,519 ft.

Al Johnson et al No. 1 Brewster, 150 ft. S and W NE NW NE sec 19-9-1e. R.U.

Perry et al No. 1 Barrett, 150 ft. N and W SE NE SE sec. 17-9-1e. S.D. for water; T.D. 1,396 ft.

W. B. Rhineck, Tr., No. 1 Swope, SW cor. NW SW sec. 16-9-1e. T.D. 1,601. Drlg. plug screen stuck. W.O.

Taw Oil Co. No. 1 Bradford, NE cor. NW sec. 16-9-1e. Set 10-in. 60 ft.; S.D.

Tri-State Leg. & Dev. Co. No. 1 Ethridge, 600 ft. S and 300 ft. W, NE cor. sec. 19-7-3w. S.D. for water; T.D. 2,460 ft.

Jackson Parish

G. W. Zeigen No. 5 La. Cen. Lbr. Co., sec. 13-14-2w. T.D. 1,770 ft.; O.W.D.D.; R.U.

La Salle Parish

Montague Oil Co. No. 7-A Zenonia Lbr. Co., NE cor. sec. 10-9-1e. Tstd. S.W. and W.O. 1,520 ft.

Lincoln Parish

Caldwell Land & Timber Co. No. 1 J. K. Hammons, 330 ft. S and E, NW cor. SE SW sec. 30-18-1w. S.D. 665 ft.

Herman L. Brown et al No. 1 S. Gardner, 230 ft. N, 380 ft. E, SW cor. NW NE sec. 10-17-4w. D.S. test 6,384-6,498 ft.; tested 5,000,000 ft. gas in 7 min.; cg. 6,560 ft.

Morehouse Parish

J. B. Collins et al No. 1 E. M. Clarke, SE NE sec. 10-20-7e. Drk.

John E. Farrell No. 22 State, 1,646 ft. S and 346 ft. E, NW cor. sec. 33-22-4e. R.U.

John E. Farrell No. 23 State, 1,341 ft. N and 3,547 ft. E, NW cor. sec. 29-22-4e. R.U.

John E. Farrell No. 24 State, 1,493 ft. S and 2,453 ft. E, NW cor. sec. 29-22-4e. R.U.

United Gas Pub. Ser. Co. No. 25 Tensas, 1,418 ft. W and 1,243 ft. S, NE cor. sec. 29-22-4e. Cmt. 6-in. 2,085 ft.; W.O.C.S.

United No. 17 Tensas, 1,320 ft. N and 1,-317 ft. W, SE cor. sec. 26-22-4e. Cmt. 6-in. at 2,136 ft.; W.O.C.S.

United No. 18 Tensas, 1,320 ft. S and 1,317 ft. W NE cor. sec. 35-22-4e. Drk.

United No. 27 Tensas, 1,288 ft. N and 660 ft. W, SE cor. sec. 4-21-3e. Cmt. 6-in. 2,083 ft.; W.O.C.S.

United Gas No. 30 Tensas, 1,313 ft. W, 664 ft. S, NE C sec. 3-21-4e. Derrick.

Natchitoches Parish

C. D. Morrison No. 1 Moffitt, 250 ft. N, 250 ft. W, SE cor. sec. 19-10-10. 10-in. set 110 ft.; W.O.C.S.

Ouachita Parish

Innerstate Nat'l Gas Co. No. 49 fee, 2,987 ft. W, 210 ft. N, NE cor. sec. 45-19-3e. Loc.

Red River Parish

Byrd Explo. Co. No. 1 Edge, NE¼, SE¼, sec. 29-13-11. T.D. 2,499 ft.; will move in rotary and D.D.

Byrd Explo. Co. No. 1 Waller, 1,570 ft. N and 1,520 ft. W, SE cor. sec. 20-13-11. T.D. 2,456 ft.; cmt. 6-in. 2,423 ft.; W.O.C.S.

W. J. Hunter et al No. 1 Long Bell Lbr. Co., NE NE sec. 19-13-9. T.D. 3,200 ft.; S.W. 2,876-80 ft.; S.D.

T. G. Shaw No. 1 Teekell, SE cor. SE SW sec. 34-13-10. T.D. 2,830 ft.; makes small heads gas oil and S.W.; will set packer.

Richland Parish

J. S. Morrisey No. 1 Jones, 1,293 ft. N, 636 ft. E, SW cor. sec. 15-18-7e. Coring 2,219 ft.

Arthur Wray No. 1 Slocum, 2,436 ft. S, 560 ft. W, NE cor. sec. 10-17-6e. S.D. 2,540 ft., sh.

Sabine Parish

I. J. Allen No. 1 Paul, sec. 24-9-14. R.U. and S.D.

Circle W. Oil Co. No. 1 Cassell, 660 ft. E and 418 ft. S, C sec. 30-9-13. T.D. 2,110 ft.; acidized; W.O.

M. C. Forsman No. 1 Patrick, NE SW sec. 21-9-13. Tested some oil; will D.D.; T.D. 1,553 ft. S.D.

F. G. Cox No. 1 Whitney Corp., C NW NE sec. 8-9-13. Drlg. 3,240 ft.

Hunter Co. No. 39 4-L Co., sec. 33-8-11. T.D. 2,717 ft.; dry and abnd.

Pearl Oil Co. No. 6 Crawford, C SE SE sec. 20-9-13. T.D. 3,472 ft. D.S. test 3,100-3,472 ft. Dry. S.D. W.O.S.

J. R. Keen No. 1 Long Bell, 376 ft. N and 388 ft. W, SE cor. NE SW sec. 4-22-3e. S.D. to repair rig; T.D. 1,858 ft.

O. S. McKnelly No. 3 Henderson, sec. 29-9-13. Drk.

A. C. Scott No. 1 Bowman Hicks, 660 ft. S and 330 ft. E, NW cor. NW SW sec. 23-9-13. T.D. 1,700 ft.; swabbing through tubing.

Claude H. Smith No. 1 Whitney Corp., 330 ft. S, 990 ft. W, NE cor. sec. 19-10-13. S.D. 3,150 ft.

A. H. Tarver No. 3 Baker, NW cor. NE sec. 36-8-12. Junked hole; will skid and redrill.

Tensas Parish

H. M. Jones et al No. 1 Chicago Mill & Lbr. Co., NE cor. sec. 30-12-10e. T.D. 780 ft.; cmtd. 8-in. 766 ft.

H. M. Jones et al No. 1 fee, SE SE 32-12-10e. Drlg. 50 ft.

Union Parish

Boucher & Pace No. 1 Frost-Johnson, NE NE sec. 27-21-1e. T.D. 4,515 ft.; S.D.; negotiating to D.D.

Federal Pet. Co. No. 1 fee, 330 ft. S and W, NE cor. sec. 34-21-3e. R.U.

Federal Pet. Co. No. 2 fee, 330 ft. S and W, NE cor. sec. 5-19-3e. Drk.

Innerstate Natural Gas Co. No. 47 fee, 2,075 ft. S, 660 ft. W, NE cor. sec. 32-20-3e. Cmt. 6-in. 2,092 ft.; W.O.C.S.

Southern Carbon Co. No. 10 Grayling, 1,-261 ft. N and 660 ft. E, SW cor. sec. 9-21-4e. 12-in. set 149 ft.; W.O.C.S.

United Carbon Co. No. 4 Stovall, 1,698 ft. E and 2,201 ft. N, SW cor. sec. 33-21-4e. Drlg. 1,925 ft.

Webster Parish

J. H. Edwards No. 1 Hooper, 330 ft. S and E, NW cor. SW sec. 8-17-9. T.A. 3,016 ft.; S.D.

J. P. Evans No. 1 Johnson, 501 ft. N, 200 ft. E, SW cor. NW SW sec. 36-18-9. Drk.

Red Hawk Oil Co. No. 1 Mayfield, sec. 9-23-9. 10-in. set 90 ft.; W.O.C.S.

Ohio Oil Co. No. 1 R. L. Holloway, 6 ft. S, 760 ft. W, C sec. 23-21-10. T.D. 8,369 ft.; conditioning mud.

L. R. Skidmore No. 1 Barnett, sec. 29-17-9. Set 12-in. 65 ft. W.O.C.S.

SOUTH LOUISIANA FIELDS

Bay St. Elaine—Terrebonne Parish

Texas Co. No. 12 State-Bay St. Elaine, sec. 20-22s-18e. Drlg. sd. and sh. 4,907 ft.

Black Bayou—Cameron Parish

Shell Pet. Corp. No. 34 Watkins, sec. 7-12s-12w. Dredging canal to loc.

Caillou Island—Terrebonne Parish

Texas Co. No. 36 State. T.D. 6,117 ft.; P.B. 2,508 ft.; sdtk. at 2,526 ft. Drlg. sh. 3,990 ft.

Texas Co. No. 42 State, sec. 47-23s-20e. T.D. 4,116 ft.; rng. 7⅝-in. csg.

Cameron Meadows—Cameron Parish

Burton Sutton Oil Co. No. 13 School Land sec. 16-14s-13w. T.D. 6,094 ft.; P.B. 4,-819 ft.; W.O.C.

Burton Sutton No. 14 School Land, sec. 16-14s-13w. Drk.

Burton-Sutton No. 2-A School Land, sec. 16-14s-13w. T.D. 3,951 ft.; P.B. and sdktd. at 3,808 ft.; drlg. sh. 4,010 ft.

Humble-Magnolia No. 17 Cameron Meadows, sec. 21-14s-13w. Drlg. sh. 3,060 ft.

Choctaw Dome—Iberville Parish

Standard Oil Co. No. 8 Myrtle Grove Wilburt, sec. 52-9s-11e. T.D. 5,828 ft.; P.B to 2,450 ft. and drlg. sdtkd. hole; no report.

Darrow—Ascension Parish

Humble O. & R. Co. No. 4 Community, sec. 33-10s-2e. Drk.

Humble O. & R. Co. No. 7 Gumble. Cg. sd. 5,239 ft.

Fausse Point—Iberia Parish

Texas Co. No. 2 State, sec. 35-11s-8e. T.D. 3,446 ft.; rmg.

Dog Lake—Terrebonne Parish

Texas Co. No. 3 State, sec. 5-22s-16e. T.D. 7,613 ft.; P.B. and sdtkd. at 5,010 ft.; drlg. sh. 6,991 ft.

Garden Island—Plaquemines

Texas Co. No. 19 Garden Isle, sec. 37-22s-33e. T.D. 4,869 ft.; trying to kill gas.

Gillis—Calcasieu Parish

R. Dobbs et al No. 1 Buhler, sec. 11-9s-8w. Sd. 5,210-64 ft.; cmtd. 7-in. csg. on bottom 5,264 ft.; I.P. 525 B.P.D. through ¼-in. ck.; T.P. 450 lbs.

Fohs Oil Co. No. 11 O. H. Castle, sec. 13-9s-8w. T.D. 7,068 ft.; 7-in. csg. on bottom; I.P. 450 B.P.D.

Fohs Oil Co. No. 1 Henry Powers, sec. 14-9s-8w. Drlg. gravel 4,498 ft.

Texas Co. No. 10 Nickerson fee, sec. 13-9s-8w. T.D. 1,205 ft.; fsg.

Union Sulphur Co. No. 7 Barbe, sec. 11-9s-8w. Drlg. sh. 5,710 ft.

Union Sulphur Co. No. 1 G. S. Cole, sec 12-9s-8w. T.D. 5,287 ft.; made dry gas; prep. to deepen.

Union Sulphur Co. No. 1 Green Acres, sec. 11-9s-8w. T.D. 7,659 ft.; P.B. to 4,-450 ft.; drlg. sh. 5,433 ft.

Union Sulphur Co. No. 13 State, sec. 12-9s-8w. Drk.

Union Sulphur Co. No. 15 State, sec. 12-9s-8w. Drk.

Hackberry—Cameron Parish

Gulf Oil Corp. No. 21 Irwin, sec. 12-12s-10w. Rig.

Pure Oil Co. No. 1 "A" Duhon, sec. 29-12s-10w. R.U.

Stanolind O. & G. Co. No. 16-A School Ld., sec. 16-12s-12w. Drlg. Anhydrite 5,339 ft.

Stanolind O. & G. Co. No. 23-B Gulf Land, sec. 14-12s-10w. R.U.; (corrected).

Sutton Oil Co. No. 5 Duhon, sec. 22-21s-10w. Drlg. sh. 2,630 ft.

Texas Co. No. 21 State, sec. 13-12s-10w. Drlg.

Texas Co. No. 19-B State, sec. 13-12s-9w. T.D. 6,734 ft.; P.B. to 4,638 ft.; sdtkd.; drld. to 5,307 ft.; P.B. and sdtk. 4,928 ft.; T.D. new hole 5,070 ft.; P.B. 4,998 ft.; drilled out to 5,010 ft.

Jeanette—St. Mary Parish

Herton Oil Co. No. 3 Banta, sec. 40-13s-9e. S.D. 9,000 ft.

Herton Oil Co. No. 4 Banta, sec. 40-13s-9e. T.D. 6,688 ft.; I.P. 30 B.P.H.; ¼-in. ck.

Herton Oil Co. No. 1 Barrileau, sec. 59-13s-8e. T.D. 1,519 ft.; W.O.C.

Herton Oil Co. No. 1 Carter, sec. 35-13s-9e. T.D. 9,602 ft.; P.B. 7,082 ft.; perf. csg. 7,015-55 ft.; I.P. 340 B.P.D. through 3/16-in. ck.; T.P. 1,200 lbs.

Bayou Mallet—Acadia Parish

Superior Oil Prod. Co. No. 1 Goss, sec. 13-7s-1e. Drlg. sh. 6,488 ft.

Jennings—Acadia Parish

Reed Crude Oil No. 10 Heywood, sec. 41-9s-2w. T.D. 2,018 ft.; 7-in. csg. 1,692 ft.; I.P. 160 B.P.D.; pmpg.

Shell Pet. Corp. No. 1 Conover, sec. 40-9s-2w. T.D. 7,545 ft.; I.P. 708 B.P.D.; 6/64-in. ck.; T.P. 2,300 lbs.; C.P. 2,325 lbs.

Stanolind O. & G. Co. No. 16 Houssiere-Latrielle, sec. 47-9s-2w. T.D. 7,052 ft.; washing over stuck D.S.

Lafitte—Jefferson Parish

Texas Co. No. 4 Lafitte, sec. 20-17s-24e. T.D. 9,420 ft.; 7⅝-in. csg. at 9,360 ft.

Texas Co. No. 5 Lafitte, sec. 20-17s-24e. Drk.

Texas Co. No. 4 Rigolettes Fur Co., sec. 29-17s-24e. T.D. 9,406 ft.; cored oil sd. from 9,370-76-77-9,402 ft.; rng. electrical cg. test.

Texas Co. No. 5 Rigolettes, sec. 29-17s-24e. Drk.

Lake Barre—Terrebonne Parish

Texas Co. No. 37 Lake Barre State. Drlg. sd. 7,067 ft.

Texas Co. No. 40 State, sec. 26-21s-19e. T.D. 3,798 ft.; I.P. 1,800 B.P.D.; ½-in. ck.

Lake Hermitage—Plaquemines Parish

Gulf Oil Corp. No. 5 LaFourche Basin Levee Bd., sec. 11-18s-25e. T.D. 5,100 ft.; P.B. 3,450 ft.; drlg. sh. 3,943 ft.

Leesville—LaFourche Parish

Delta Oil Co. No. 1 Constantine, sec. 34-21s-22e. T.D. 5,043 ft.; 7-in. csg. at 5,009 ft.; S.D.

Lincoln Oil Co. No. 2 Constantine, sec. 27-21s-22e. S.D. in sdtkd. hole 4,648 ft.

Lincoln Oil Co. No. 9 State, sec. 34-21s-2e. 10¾-in. csg. at 769 ft.; drlg. plug.

Texas Co. No. 48 Leesville, sec. 27-21s-22e. R.U.

Texas Co. No. 53 L.L.&E., sec. 34-21s-22e. Drlg. sd. 5,364 ft.

New Iberia—Iberia Parish

Canal Oil Co. No. 3 Sabetier, sec. 54-12s-7e. S.D. salt 3,180 ft.

Fotadies No. 2 Gulf fee, 400 ft. W of No. 1. Drlg. sh. 1,530 ft.

Fotadies No. 3 Gulf fee, sec. 25-17s-7e. Drlg. wtr. sd. 4,319 ft.

Kitos Oil Co. No. 3-A Sealey, sec. 56-12s-7e. T.D. 4,560 ft.; P.B. to 2,300 ft.; S.D.

Teche Oil Co. No. 1 Schwing, sec. 52-12s-7e. P.B. and sdtkd.; drlg. 4,428 ft.

Roanoke—Jefferson Davis Parish

Gulf Oil Corp. No. 2-B Anding, sec. 2-9s-4w. T.D. 8,724 ft.; I.P. 900 B.P.D.

Humble O. & R. Co. No. 4-B Devilbiss, sec. 11-9s-4w. Drlg. sdy. sh. 8,897 ft.

Shell Pet. Corp. No. 3 Carter, sec. 1-9s-4w. Drlg. sh. 8,320 ft.

Port Barre—St. Landry Parish

Pan American Prod. Co. No. 2 Colmier, sec. 4-6s-5e. T.D. 4,364 ft.; P.B. to set whipstock at 3,650 ft.

Pan American Prod. Co. No. 2 Haas Hirsch, sec. 4-6s-5e. Drk.

Texas Co. No. 1 Lahaye, sec. 4-6s-5e. Drlg. sd. 5,147 ft.

St. Martinville—St. Martin Parish

Continental Oil Co. No. 1 fee, sec. 18-11s-6e. T.D. 8,150 ft.; P.B. 7,353 ft.; perf. csg. 20 holes, 7,344-53½ ft.; would not flow; swbg.

Sorrento—Ascension Parish

Pan American Prod. Co. No. 5 United Lands, sec. 15-10s-4e. Drk.

Sulphur—Calcasieu Parish

Continental Oil Co. No. 5-A Homeseekers Dev. Co., sec. 29-7s-2w. R.U.

Continental Oil Co. No. 6-A Homeseekers Dev. Co., sec. 29-7s-2w. Loc.

Continental Oil Co. No. 3-A Welch, sec. 28-7s-2w. T.D. 1,517 ft.; 10-in. csg. 1,490 ft.

Union Sulphur Co. No. 330 fee, sec. 29-9s-10w. Drk.

Tepetate—Acadia Parish

Continental Oil Co. No. 1 Doris Fruge, sec. 28-7s-2w. Drlg. sh. 7,534 ft.

Vinton—Calcasieu Parish

Vinton Pet. Co. No. 1 fee, sec. 34-10s-12w. T.D. 4,347 ft.; S.D.

White Castle—Iberville Parish

Shell Pet. Corp. No. 3 Shingle, 660 ft. S. 660 ft. E of NW cor. sec. 12-11s-12e. T.D. 6,074 ft.; sdy sh.; fsg.

S. LOUISIANA WILDCATS

Acadia Parish

Magnolia Pet. Co. No. 1 Homeseekers Dev. Co., sec. 54-10s-1w. T.D. 9,465 ft.; fsg.

Allen Parish

Humble O. & R. Co. No. 2 Bell est., 933 ft. N and E, sec. 28-6s-7w. T.D. 3,044 ft.; perf. csg. 2,876-81 ft.

Avoyelles Parish

Frost Oil Co. No. 1 Hines Lumber Co., sec. 3-3n-4e. Drk.

Calcasieu Parish

Buhler Oil Co. No. 2 Faizst, sec. 26-8s-10w. Old T.D. 4,412 ft.; P.B. to 2,000 ft.; S.D. 4,122 ft.

Cameron Parish

Magnolia Pet. Co. No. 1 Hebert, sec. 13-12s-9w. Sd. S.O. 8,606-18 ft.; cmtd. csg. 8,603 ft.; set screen and lnr.; C.O.; flwg. wash wtr. with scum of oil.

East Baton Rouge Parish

Cavalier Oil Co. No. 1 Vingnes, sec. 40-8s-2e. R.U. and S.D.

East Feliciana Parish

East Feliciana Oil No. 1 West & Budding, sec. 37-1s-1w. Spudded 15 ft. and S.D. P.B. again; milled out 5,710 ft.; drlg. sh. 6,007 ft.

Iberia Parish

Jefferson Lake Oil Co. No. 1 State, Twp. 13s-5e. T.D. 8,610 ft.; P.B. to 8,483 ft.; perf. from 8,460-66 ft.; P.B. to 8,183 ft.; P.B. again and milled out at 5,670 ft.

Jefferson Lake Oil Co. No. 322 State Lake Pleigneur. T.D. 5,690 ft.; P.B. 3,000 ft.; milling out at 4,426 ft.

Texas Co. No. 1-B State, Vermillion Bay, sec. 20-15s-6e. R.U.

Jefferson Davis Parish

Shell Pet. Corp. No. 1 Lacassine, sec. 20-11s-5w. T.D. 9,844 ft.; S.D.; hd. sd.

Stanolind O. & G. Co. No. 1 C. E. Britt, sec. 15-10s-3w. Drlg. L. 4,310 ft.

Strake Oil Corp. No. 1 Onezia Miller Est., sec. 7-9s-5w. Drlg. sh. 7,415 ft.

Livingston Parish

Coastline Oil Co. No. 1 Addison Trust Co., sec. 7-7s-3e. Drk.

St. Bernard Parish

John Cartwright No. 1 Meraux Nunes, sec. 19-13s-12e. S.D. 225 ft.

St. James Parish

Shell Pet. Corp. No 1 Colonial Sugar sec. 5-12s-5e. T.D. 7,522 ft.; top salt 7,492 ft.; P.B. to 2,690 ft.; sdtkd. and drlg. sh. 3,171 ft.

St. Martin Parish

Texas Co. No. 2 State, sec. 14-10s-9e. Drlg. bkn. sd. and sh. 6,955 ft.

Texas Co. No. 8 St. Martins Land, sec. 17-8s-7e. Drlg. sdy. sh. 8,222 ft.

Terrebonne Parish

J. B. Beck et al No. 1 Realty Operators, sec. 103-17s-17e. W.O.C. 675 ft.

Humble O. & R. Co. No. 1 Continental Land & Fur Co., sec. 30-17s-14e. T.D. 3,004 ft.; 13⅜-in. csg. at 2,613 ft.

Vermillion Parish

Continental Oil Co. No. 1 O. C. Hebert, sec. 20-12s-3e. Drlg. sd. and sh. 10,022 ft.

Delcambre & Shelton No. 1 Delcambre, sec. 63-12s-6e. S.D. 2,708 ft.

Del-Sheil Exploration Co. No. 1 Landry heirs, sec. 1-13s-4e. Drlg. sh. 2,110 ft.

Louisiana Land & Expl. Co. No. 1 La. Fur Co., sec. 16-15-1e. Bldg. foundations.

TEXAS

Week Ending June 27

GULF COAST FIELDS

Raccoon Bend—Austin County

Humble O. & R. Co. No. 3-B Machemehl, Wm. Smeathers Sur. T.D. 4,110 ft.; 7-in. csg. at 4,046 ft.; I.P. 13 B.P.H.; ¼-in. ck.; T.P. 400 lbs.; C.P. 600 lbs.

Humble O. & R. Co. No. 5 Sanders (W.O.). T.D. 4,171 ft.; to perf. from 4,043-4,-108 ft.

Humble O. & R. Co. No. 5-A Machemehl, Wm. Smeathers Sur. Drlg. sh. 1,620 ft.

Hastings—Brazoria County

Humble O. & R. Co. No. 5 C. A. Cannon, H.&T.B. Sur., sec. 36. T.D. 6,020 ft.; 7-in. csg. at 5,873 ft.; drlg. plug.

Stanolind O. & G. Co. No. 5 Drake, H.T.&B. Sur. No. 36. T.D. 5,744 ft.; 7-in. csg. at 5,616 ft.; drlg. plug.

Stanolind O. & G. Co. No. 1 Elliott, Wm. Henry Sur. R.U.

Stanolind O. & G. Co. No. 3 Ford, A.C.H.& B. Sur. No. 1. T.D. 6,060 ft.; I.P. 13 bbls. in 6 hrs.; ¼-in. ck.

Stanolind O. & G. Co. No. 1 Reichardt, H.T.&B. Sur. No. 29. Drk.

Stanolind O. & G. Co. No. 1 Rosmussen & Moore, Moore and Rasmussen Sur. Drlg. sh. 2,415 ft.

Stanolind O. & G. Co. No. 6 Shaw, H.T.&B. Sur. No. 36. T.D. 115 ft.; W.O.C.

Stanolind O. & G. Co. No. 6 Turner, A.C. H.&.B. Sur. No. 1. T.D. 6,069 ft.; I.P. 590 B.P.D.; ¼-in. ck.; T.P. 925 lbs.; C.P. 875 lbs.

Stanolind O. & G. Co. No. 5 H. G. Williams, A.C.H.&B. Sur. T.D. 6,080 ft.; 7-in. csg. at 6,060 ft.; I.P. 188 bbls. in 10 hrs.; ¼-in. ck.; T.P. 650 lbs.; C.P. 650 lbs.

Danbury—Brazoria County

Humble O. & R. Co. No. 1 Moller, S. A. Towsey Sur. R.U.

Old Ocean—Brazoria County

Harrison & Abercrombie No. 1 Armstrong Plantation fee, Polly and Chance Sur. Drlg. sh. 6,227 ft.

Manvel—Brazoria County

Texas Co. No. 5 A.R.G.C. Co. T.D. 4,048 ft.; 7-in. 4,038 ft.; I.P. 200 B.P.D. on pump.

Texas Co. No. 24-B Belcher, H. M. Little Sur. Drlg. sh. 5,081 ft.

Texas Co. No. 32 Houston Oil Field Assn., A.C.H.&B. Sur. No. 1. Drlg. l. sh. 5,081 ft.

Texas Co. No. 4 Lieder (D.D.) T.D. 4,022 ft. in sd.; 7-in. csg. at 3,971 ft.; std. at 2,200 ft. showing oil and wash wtr.

Stratton Ridge—Brazoria County

Warner Oil Co. No. 3 Dannenbaum, J. D. Grace Sur. S.D. at 1,280 ft.

West Columbia—Brazoria

Texas Co. No. 13 Abrams, George Tennille Sur. Drlg. sh. 3,584 ft.

Texas Co. No. 85 Hogg, Geo. Tenille League. Drlg. sd. and l. 1,785 ft.

Heyser—Calhoun County

Humble O. & R. Co. No. 2 Welder, Jose Maria Rios Sur. T.D. 4,789 ft.; prep. to make D.S.T.

Anahuac—Chambers County

Gulf Oil Corp. No. 3 Knowles. Drlg. sh. and l. 2,047 ft.

Humble O. & R. Co. No. 8 J. E. Broussard, H.&T.C. Sur., sec. 63. T.D. 7,085 ft.; 7-in. csg. at 7,055 ft.; tstg.

Humble O. & R. Co. No. 6 H. A. Gripon, H.&T.C. Sur., sec. 48. Drlg. l. 6,189 ft.

Humble O. & R. Co. No. 2 C. C. Johnson, H.&T.C. Sur., sec. 49. Drlg. sh. 2,-032 ft.

Humble O. & R. Co. No. 2 C. A. Lord, H.&T.C. Sur., sec. 50. T.D. 7,164 ft.; P.B. to 6,759 ft.; prep. to sdtr.

Humble O. & R. Co. No. 12 Terrell, H.&T. C. Sur. Drlg. sh. 2,260 ft.

Humble O. & R. Co. No. 11 White, James McGahey Sur. T.D. 7,082 ft.; I.P. 22 B. P.H.; ¼-in. ck.; T.P. 770 lbs.

Humble O. & R. Co. No. 1-B White, James McGahey Sur. T.D. 7,096 ft.; ed. oil sd. 7,096-7,106 ft.; set liner; W.O.C.

Sun Oil Co. No. 15 White J. McGahey Sur. T.D. 7,100 ft.; cmtd. back; prep. to sdtk.

Sun Oil Co. No. 17 White, James McGahey Sur. Drk.

Sun Oil Co. No. 19 White, James McGahey Sur. Cg. sdy. sh. 7,007 ft.

Big Creek—Fort Bend County

Gulf Oil Corp. No. 69 Davis, B. Young League. S.D. 4,082 ft.

Blue Ridge—Fort Bend County

H. G. Frost et al No. 1 Robinson, H. Shropshire Sur. T.D. 3,666 ft.; abd. in sdtkd. hole 3,200 ft.

Trans-State Oil Co. No. 4-B Blakely, E. Drew Sur. Abd. 4,785 ft.

Orchard—Fort Bend County

Gulf Oil Corp. No. 46 Moore, Leo Burknapp Sur. Drlg. sh. and l. 3,171 ft.

Gulf Oil Corp. No. 47 Moore, Leo Burknapp Sur. Drlg. sd. 587 ft.

Gulf Oil Corp. No. 5-A Moore. Abd. 1,-816 ft.

Thompson—Fort Bend County

Naylor et al No. 8 Gehr, S. Kennedy Sur. S.D. 4,431 ft.

Sterling O. & R. Co. No. 1 F. I. Booth, H. Chrisman Sur. T.D. 5,407 ft.; 7-in. csg. at 5,320 ft.; swbd.; would not flow; R.U. to pump.

High Island—Galveston County

Stanolind O. & G. Co. No. 56 Cade, N. Fitzsimmons Sur. T.D. 6,462 ft.; prep. to cmt. hole 6,082-5,900 ft.

Stanolind O. & G. Co. No. 57-A Cade, N. Fitzsimmons Sur. R.U.

Stanolind O. & G. Co. No. 1 Cooper, M. Dunman Sur. T.D. 5,715 ft.; drill pipe stuck.

Stanolind Oil & Gas Co. No. 18-B Smith Royalty, M. Dunman Sur. T.D. 5,539 ft.; P.B. 3,650 ft.; sdtkd. at 4,022 ft.; drld. to 5,036 ft.; R.U. to pump.

Dickinson—Galveston County

Humble O. & R. Co. No. 8-A Stewart, J. Sellers Sur. T.D. 8,026 ft.; I.P. 30 B.P. H.; ¼-in. ck.; T.P. 1,300 lbs.; C.P. 1,-450 lbs.

Humble O. & R. Co. No. 4-B Stewart, John Sellers Sur. T.D. 224 ft.; W.O.C.

Humble O. & R. Co. No. 6-B Stewart, W. K. Wilson Sur. R.U.

Humble O. & R. Co. No. 4 E. E. Townes. J. S. Jones and B.B.B.&C. Ry. Sur. T D. 5,565 ft.; fsg.

Stanolind O. & G. Co. No. 4 State, Tr. T.D. 8,125 ft., top sand at 8,107 ft.; P.B. 8,000 ft.; 7-in. csg. at 7,980 ft.; well went dead; pulling screen and lnr.

Stanolind O. & G. Co. No. 5 State, Tract 8. T.D. 9,155 ft.; W.O.

Arriola—Hardin County

Republic Prod. Co. No. 13 Arriola fee, Arriola League. Drlg. sh. 1,037 ft.

Batson—Hardin County

Gulf Oil Corp. No. 175 Wing, F. H. Green Sur. Drlg. 37 ft.

Lacawanna Prod. Co. No. 1 Butler, W. Donoho Sur. Drlg. sd. 5,700 ft.

Saratoga—Hardin County

Rio Bravo Oil Co. No. C-151 Cotton Tract. T.D. 1,133 ft.; set plug.

Eureka—Harris County

Houston Oil Co. No. 1 Helberg & Lackner, John Rinerman Sur. 13⅜-in. csg. 1,480 ft.

Mykawa—Harris County

West Prod. Co. No. 9 Irwin, W. B. Walker Sur. T.D. 5,140 ft.; P.B. to 4,053 ft.; abd.

West Prod. Co. No. 1 Minnetex, Wm. Lovett Sur. Drlg. sh. 5,530 ft.

Pierce Junction—Harris County

Rio Bravo Oil Co. No. 14-B Settegast, J. Kappman Sur. T.D. 4,554 ft.; perfd. 3,678-3,722 ft. with 48 shots; setg. screen.

Gulf Oil Corp. No. 12 Cain, J. Hamilton Sur. Drlg. sh. 3,082 ft.

Gulf Oil Corp. No. 4 Manchester. Drlg. sh. 4,614 ft.

South Houston—Harris County

Schwab & C. & C. Drlg. Co. No. 1 Williams. Drlg. 4,793 ft.

Smith & McDannald No. 1 Merridith, H. T.&B. Sur. No. 6. T.D. 4,775 ft.; I.P. 623.75 B.P.D.; ¾-in. ck.; T.P. 600 lbs.; C.P. 575 lbs.

Stanolind O. & G. Co. No. 1 Minnie Barrett, H.T.&B. Sur. No. 6. Drlg. sh. 3,-947 ft.

Stanolind O. & G. Co. No. 1 M. Buts, H.T.&B. Sur. No. 6. T.D. 4,775 ft.; 7-in. at 4,666 ft.; I.P. 481 B.P.D.; ¼-in. ck.

Stanolind O. & G. Co. No. 2 District 17, Blk. "A." Drlg. sh. 1,266 ft.

Stanolind O. & G. Co. No. 1 Howard, H. T.&B. Sur. No. 6. Drlg. sh. 4,015 ft.

Stanolind O. & G. Co. District 24, H.T.&B. Sur. No. 5. T.D. 4,490 ft.; I.P. 91 B.P.D.; ¼-in. ck.; T.P. 180 lbs.; C.P. 175 lbs.

Stanolind O. & G. Co. No. 3 First Natl. Bank, Callahan-Vince Sur. Sh. 4,833 ft.; 7-in. csg. at 4,777 ft.; I.P. 69 bbls. in 12 hrs.

Stanolind O. & G. Co. No. 1 Holder, Unit 5, So. Houston Gardens No. 6. T.D. 115 ft.; W.O.C.

Stanolind O. & G. Co. No. 1 Pittman, H. T.&B. Sur. No. 6. T.D. 706 ft.; W.O.C.

Stanolind O. & G. Co. No. 2 Schwartz, H. T.&B. Sur. T.D. 4,775 ft.; waiting orders.

Stanolind O. & G. Co. No. 1 C. J. Wyndelts, H.T.&B. Sur. No. 6. T.D. 4,775 ft.; 7-in. csg. at 4,595 ft.; comp.; no gauge.

Tomball—Harris County

Humble O. & R. Co. No. 4 Milo, C. N. Pillot Sur. T.D. 5,561 ft.; I.P. 21 B.P.H.; ¼-in. ck.; T.P. 700 lbs.; C.P. 700 lbs.

Humble O. & R. Co. No. 1 Townsite Unit 2, J. House Sur. T.D. 5,587 ft.; 7-in. csg. at 5,582 ft.

Humble O. & R. Co. No. 5 F. Treischel, J. House Sur. T.D. 5,563 ft.; 7-in. csg. at 5,558 ft.

Amelia—Jefferson County

Humble O. & R. Co. No. 2 M. E. Langham. T.D. 6,778 ft.; I.P. 26.78 B.P.H.; ¼-in. ck.; T.P. 900 lbs.; C.P. 900 lbs.

Glenn H. McCarthy, Inc., No. 1 Langham, H. Williams Sur. T.D. 6,302 ft.; P.B. to 4,800 ft. to straighten hole.

Humble O. & R. Co. No. 2 S. Pinchback, C. Williams Sur. Drlg. sh. 3,135 ft.

Big Hill—Jefferson County

Stanolind O. & G. Co. No. 3-A Pipkin and Davis, Wm. McFaddin Sur. Heaving hole 6,650 ft.

Fannett—Jefferson County

Gulf Oil Corp. No. 10 Burrell, W. H. Smith Sur. Drlg. rock 3,005 ft.

Cleveland—Liberty County

Gulf Oil Corp. No. 15-C Cleveland, J. Pleasant Sur. Comp.; no gauge.

Esperson—Liberty County

General Crude Oil Co. No. 26 Esperson, C. W. Fisher Sur. Drlg. sh. 3,548 ft.

General Crude Oil No. 16 Moores Bluff. Rng. surf. csg. 465 ft.

Hankamer—Liberty County

Union Oil Co. No. 5 Exzell, Levi Borrow Sur. T.D. 5,590 ft.; fsg.

Van Vleck—Matagorda County

Skelly Oil Co. No. 8-B Cobb, M. Cummins Sur. Drlg. sdy. sh. 6,292 ft.

Skelly Oil Co. No. 1 Langham, M. Cummings Sur. Drlg. sd. 8,025 ft.

Skelly Oil Co. No. 2 Metzler, M. Cummins Sur. Moving in.

Skelly Oil Co. No. 1 G. Moore, I.&G.N. Sur. Drlg. sdy. sh. 5,450 ft.

Skelly Oil Co. No. 7-B Cobb, M. Cummings Sur. T.D. 7,450 ft.; prep. to core.

Livingston—Polk County

Humble O. & R. Co. No. 27 C. B. Granburg, A. Viesca Sur. T.D. 4,217 ft.; I.P.

13 B.P.H.; ¼-in. ck.; T.P. 550 lbs.; C.P. 675 lbs.

Humble O. & R. Co. No. 28 Granburg, A. Viesca Sur. R.U.

Refugio—Refugio County

Local Oil Co. No. 1 Rhea, Refugio Town Tr. Drlg. sh. 4,637 ft.

National Pet. Corp. No. 1 S.L.B.&M.R.R. R.U.

W. F. Stone No. 1 C. P. Fox, Refugio townsite tr., Blk. 1, sec. 5. Drlg. sh. 1,033 ft.

United Gas Co. No. 19 Fox. Drlg. sdy. sh. 3,612 ft.

United Prod. Co. No. 13 Fannie Heard, Refugio Town Tr. Drlg. sh. 4,432 ft.

United Prod. Co. No. 25 M. F. Lambert, Swisher Sur. T.D. 5,905 ft.; oil sd. 5,-894-5,904 ft.; tstg.

United Prod. Co. No. 8 N. J. Ryalls, Refugio Town Tr. T.D. 4,930 ft.; 5-in. csg. 4,923 ft.

Tomoconnor—Refugio County

Quintana Pet. Co. No. 36-A Tom O'Connor, Swisher Sur. Drlg. sh. 5,779 ft.

Keeran—Victoria County

Gulf Oil Corp. No. 8 Keeran, DeLeon Sur. T.D. 6,444 ft.; P.B. 5,924 ft.; flwd. 107 bbls. first 9 hrs.; ¼-in. ck.; T.P. 1,900 lbs.; C.P. 2,100 lbs.

Placedo—Victoria County

Barnsdall-American Liberty No. 3 Pickering-Roos, J. M. Bronson Sur. T.D. 4,-767 ft.; 7-in. csg. 4,752 ft.; I.P. 186 bbls. in 14 hrs.; 3/10-in. ck.; T.P. 525 lbs.; C.P. 125 lbs.

Barnsdall-American Liberty No. 3 W. R. Smith, A. Murphy Sur. Cmtd. sur. csg. 350 ft.

Barnsdall and Coastal Oil Co. No. 3 Wright, J. M. Bronson Sur. Drlg. sh. 4,-550 ft.

Crown Central Pet. Co. No. 3 Gebraner, J. M. Bronson Sur. 7-in. csg. at 4,373 ft. I.P. 8½ B.P.H.; 3/16-in. ck.; T.P. 440 lbs.; C.P. 600 lbs.

Eastern Texas Pet. Co. No. 2 Hosek, J. M. Bronson Sur. T.D. 4,778 ft.; rmg. to set 7-in. csg.

Haynes B. Ownby No. 1 Joe Malik, J. M. Bronson Sur. T.D. 4,772 ft.; fsg.

Superior O. & G. Co. No. 2-B Henderson & Pickering, J. M. Bronson Sur. T.D. 4,785 ft.; 7-in. csg. at 4,778 ft.

Clay Creek—Washington County

Sun Oil Co. No. 6 Caraway, J. F. Perry Sur. T.D. 1,223 ft.; comp.; no gauge.

Sun Oil Co. No. 7 Caraway, J. F. Perry Sur. Rlg.

Sun Oil Co. No. 1 H. Lauter, N. Clay Sur. Drlg. sh. 6,276 ft.

Louise—Wharton County

Pure Oil Co. No. 6 Chas. T. Kauntze, Morris-Cummins Sur. No. 19. T.D. 5,139 ft.; prep. to core.

Pure Oil Co. No. 5 McIntyre, Morris-Cummins Sur. T.D. 5,155 ft.; set 5-ft. screen and lnr.; 2½-in. tbg.; pulled screen; well killed.

Pure Oil Co. No. 1 Sara G. Shult, L. P. Ogden Sur. R.U.

Pickett Ridge—Wharton County

Adrian Moore No. 1 W. P. Wilbeck, J. Tele Forinor Sur. T.D. 4,719 ft.; perf. 4,-701-03 ft. with 12 holes; swbd. S.W.; S.D.

Edwards Drlg. Co. No. 1 E. D. Farmer, I.&G.N. Sur. No. 39. Cg. 4,710 ft.

Rio Bravo Oil Co. No. 1 T.&N.O. R.R. Co., I.&G.N. Sur. No. 39. Drlg. sh. and l. 2,-337 ft.

Texas Co. No. 22-A Pierce, I.&G.N. Sur. T.D. 4,708 ft.; 7-in. csg. at 4,701 ft.; I.P. 18 B.P.H.; ¼-in. ck.; T.P. 500 lbs.; C.P. 475 lbs.

Texas Co. No. 23-A Pierce, I.&G.N. Sur. No. 38. Drlg. sd. 4,709 ft.

Texas Co. No. 24-A Pierce, I.&G.N. Sur. Drlg. sh. 4,600 ft.

Texas Co. No. 25-A Pierce, I.&G.N. Sur. Drk.

Withers—Wharton County

Texas Co. No. 2-B Pierce, Pierce Est., Blk. B. 16-in. csg. at 38 ft.; W.O.C.

Texas Co. No. 8-C Pierce, Wm. Pettus Sur. Drlg. sh. and l. 3,515 ft.

Texas Co. No. 9-C Pierce, John Caldwell Sur. Drk.

GULF COAST WILDCATS

Austin County

W. H. Mitchell et al No. 1 F. Fenner, J. Fitzgibbons Sur. R.U.

Brazoria County

Deep South Pet. Co. No. 1 Adams Hrs. & Dummick, A. A. Talmage Sur. Abd. 2,-300 ft.

Gulf Oil Corp. No. 1 Fairfield, A. Robinson Sur. Drlg. sh. 8,410 ft.

Strake Oil Corp. et al No. 1 D. K. Poole, J. W. Hardin Sur. T.D. 6,738 ft., hd. sh., 9⅝-in. csg. at 6,736 ft.; drlg. plug.

Texas Co. No. 3 Freeport Sulphur Co., C. Areola Sur. Drlg. sh. 5,516 ft.

Texas Gulf and Bunte No. 1 Sparks, Wm. Roberts Sur. T.D. 7,525 ft.; set 5-in. csg. at 5,872 ft.; tstd. S.W. and abd.

Calhoun County

Continental Oil Co. No. 1 Austin Estate, sec. 12, Blk. H. Drlg. sh. 6,450 ft.

Colorado County

Coyle-Concord & Sterling No. 1 Mary E. South, I.&G.N. Sur., sec. 41. Rig and S.D.

Fort Bend County

Texas Co. No. 1 Sugarland, Inc., John Foster Sur. R.U.

Galveston County

Shell Pet. Corp. No. 1 Mace Stewart, Spilli-man Sur. Drlg. l. 4,560 ft.

Sun Oil Co. No. 1 Houston Farms, D. Buckley Sur. Bldg. drk.

Sun Oil Co. No. 2 Hughes, W. C. M. Baker Sur. Drlg. sd. and bldrs. 798 ft.

Hardin County

S. Hindman No. 1 Howth, A. J. Cotten Sur. Drlg. sh. 4,915 ft.

Republic-Houston Oil Co. No. 2 Burrell, A. A. Burrell Sur. Abd. 7,077 ft.

Harris County

Bunte O. & G. Co. No. 1 Lobit et al, Benjamin Barrow Sur. Drk.

Circle W. Oil Co. No. 1 Houston Realty Sales Corp., Harris & Carpenter Sur. Spudded.

Zeni Oil Co. No. 1 W. A. Perkins, A. Sher-rell Sur. Drlg. sh. 5,987 ft.

Houston County

Ellison & McBride No. 1 Bean, E. Sted-man Sur. Cg. sh. 5,988 ft.

Jackson County

Steinberger Pet. Corp. No. 1 Drushel, F. Rodrigues Sur. W.O.C. 1,185 ft.

Jefferson County

McSpadden et al No. 1 Burrell estate. Drlg. sh. 7,835 ft.

Shell Pet. Corp. No. 1 Carpenter, M. E. Piveto Sur. Cg. shaley sd. S.O. 6,101 ft.

Sun Oil Co. No. 1 Herbert & Broussard, B. Blackman Sur., Abst. No. 2, T.D. 8,-750 ft.; topped gas sd. 8,737 ft.; well tried to blow out.

Matagorda County

Marathon Oil Co. No. 1 Kountze, I.&G.N. Sur. No. 11. Prep. to spud.

Pierce Estate Inc. No. 1 Fee, Wm. Brown Sur. Drlg. sh. 2,810 ft.

Sun Oil Co. No. 1 Craig, Thomas Williams, Sur. T.D. 6,326 ft.; P.B. 5,850 ft.; perf. csg. 5,240-95 ft.; swbd. dry; perf. csg. from 5,240-95 ft.; P.B. to 5,180 ft., to perf. from 5,150-75 ft.; recovered 1,500 ft. of oil on each swab.

Texas Gulf Prod. Co. (H. M. Smith) No. 2 Wadsworth, S. R. Fisher Sur. Sh. 1,320 ft.; R.U.

Montgomery County

W. O. Bilonski et al No. 1 J. W. Wood, Wm. Weir Sur. T.D. 3,757 ft.; 5 3/16-in. csg. 3,720 ft.; W.O.C.

Walter Blumenthal No. 1 Delta Land & Timber Co., J. Beuhn Sur. Abd. 4,011 ft.

Orange County

Tide Water Oil Co. No. 1 E. N. Brown, Mary Latham Sur. Drlg. sh. 5,792 ft.

Polk County

Turnbull & Irwin No. 1 Mrs. Roberts, J. F. de Rumayor Sur. Cg. sh. 5,061 ft.

Refugio County

Benedum & Trees No. 1 R. H. Welder, Juan Pabedan Sur. R.U.

Mills Bennett Prod. Co. No. 1 Walzell, E. Lopez Sur., Bonnie View Addn. Drlg. sh. 1,530 ft.

San Jacinto County

J. A. Deering No. 1 Randolph, V. Flores Sur. R.U.; drlg. wtr. well.

Tyler County

McArthur & Mixon No. 1 D. D. Kounts, J. A. Honkins Sur. T.D. 65 ft.

Walker County

Beone Bros. No. 1 Thompson Bros., J. Ortego Sur. Abd. 3,000 ft.

L. M. Gay et al No. 1 M. E. Stubblefield, G. Bodilla Sur. R.U.

Wharton County

Cockburn Oil Co. No. 1 Fee, J. Smith & H. McKinzie Sur. Drk.

Pure Oil Co. No. 1 A. P. Borden et al, W. H. Leckie Sur. No. 25. R.U.

Pure Oil Co. No. 1 Sam Shultz, L. P. Odgen Sur. No. 108. Drlg. sh. 1,944 ft.

Smith & McDannald No. 1-A Priesmeyer, Charles Riley Sur. Drlg. sh. 5,910 ft.

S. W. TEXAS WILDCATS

Aransas County

Buckingham Oil Co. No. 1 McCampbell, sec. 41-42, James Aride Sur. T.D. 7,501 ft.; set csg. 1,225 ft.; C.O. 4,700 ft.

Atascosa County

Atascosa Trust No. 1 Domsch, **160 ft. S line, 300 ft. E line, 152-ac. lease, J. T.** Russell Sur. 1,222. Drlg. Austin chalk 3,556 ft.

Heinetia Oil Co. No. 1 S. Pratt, 1,400 ft. NW line, 2,470 ft. SW line, J. de la Garza Sur. 46. Drlg. 1,217 ft.

Bee County

Dirks Bros. No. 1 Bergel, 330 ft. N and E lines lse., E. C. White Sur. Drlg. 1,-020 ft.

Eden Oil Co. No. 1-C Copeland, 1,723 ft. N line, 330 ft. W line, 80-a. tr., O. Marshall Sur. M.I.M.

Howeth & Singer No. 1 Voss, 990 ft. NW line, 330 ft. SW line, S. May Sur. Sd. 4,-017-21 ft.; comp.; 10 B.P.H. on ¼-in. ck.; T.P. 250 lbs.; C.P. 450 lbs.

LaSalle Oil Co. No. 1 Ray, 360 ft. E line, 330 ft. N line, 40-ac. tr., Anna Burk Sur. T.D. 4,470 ft.; resumed drlg.

Nichols & Quinn No. 1 Scott, Blk. 7, J. Molina Sur., Uranga grant. Derrick.

Severy Oil Co. No. 1 Copeland, **330 ft. N line, 2,100 ft. E line. O. Marshall Sur.** Perf. 3,470-74 ft.; S.W.; T.A. 3,474 ft.

Bexar County

Fred Thorman No. 1 Sahm, Peter B. Hayes Sur. Drlg. 1,412 ft.

Woodward & Hardy No. 1 DeVilbiss, J. W. DeVilbiss Sur. Cg. 2,277 ft.

Brooks County

California Co. No. 1 B. Garcia, 465 ft. N and W lines lse., B. Garcia tr., Salinas Sur. T.D. 3,022 ft. Fsg.

Cameron County

W. W. Ely No. 1 Port Isabel Irrigation Co., Blk. 17, Shares 29, 30 and 31, P. I. I. Co. Subd. Loc.

Dewitt County

Universal Oil, Gas & Mining Co. No. 1 Schuebel, 330 ft. S and W lines tr., Fitzgerald gr. S.O. 1,559 ft.; set csg.; drlg. pluga.

Duval County

Conservative Oil Co. No. 1, D.C.R.C. Sur. 51. D.S.T. 550 ft. oil, 200 ft. s.w. in 15 min. at 1,533-53 ft.; P.B. 1,548 ft.; set csg. 1,553 ft.; perf. 1,530-33 ft.; swbd. S.W.; pulling screen and lnr. to D.D.

Gifford Oil Co. No. 1 Roach, Sur. 200. Drlg. 2,030 ft.

C. G. Glasscock No. 2 Milano S.&G. Co., 330 ft. N line, 2,310 ft. E line, Sur. 88. Cd. sd. 3,275-91 ft.; set 7-in. csg. 3,273 ft.; swbd. dry; pulling tbg. and lnr. to C.O.

Frank Gravis No. 1 C. K. Gravis, 1,650 ft. SE line, 990 ft. SW line, Sur. 250. Set csg. 5,080 ft. Drlg. pluga.

Hamil & Smith No. 1 Benavides, Subd. 1, J. B. Sands, Mesquite Sur. Drlg. sdy. sh. 2,235 ft.

J. J. O'Hern No. 1 Carrillo, Sur. 492. T.D. 3,307 ft.; D.&A.

Randon Oil Co. No. 1 Central Securities. Drlg. sh. 1,505 ft.

Rogers & Rogers No. 1 Pena, 3,337 ft. SW line, 1,306 ft. NW line, R. S. de Pena plat. Sd. 2,850-62 ft.; cd. saturation; set csg. 2,845 ft.; swbg. oil.

Goliad County

C. Morgan No. 1 Metz, 4,290 ft. N line, 330 ft. E line tr., G. Barrera Sur. Loc.

Zeni Oil Co. No. 3 Lutenbacher, 330 ft. N and W lines, SE¼, sec. 25. Ran Schlumberger test; sd. 4,135-50 ft.; tstd. S.W.; D.D.

Hidalgo County

Gulf States Oil Co. No. 3 John Engle-man, Lot 3, Blk. 70. T.D. 6,812 ft.; sh.; P.B. 6,695½ ft.; drlg. 6,695½-98 ft.; showed 5 to 6 bbls. fluid per hr., 90% S.W.; 10% dist. on 10/64-in. ck. and 500,000 ft. gas.

Helen K. Maxwell No. 1 Hidalgo Wtr. Dist. No. 2, Lot 11, Blk. 20, Alamo Land & Sugar Co. Subd., Alamo Tr. T.D. 731 ft. S.D.

Quintana Petroleum Co. No. 1 John C. En-gleman, Lot 16, Blk. 94, Las Mestanas grant. T.D. 8,904 ft.; cut and pulled 2,200 ft. D.S.

Dayle Smith No. 1 Fairbanks & Young, Blk. 44, Porc. 46. S.D. 1,872 ft.

Jim Hogg County

J. J. Cosner No. 1 Vela hrs., Sh. 1, Blk. 5, Clark & Cowden Subd., El Peyote gr. Loc.

Magnolia Pet. Co. No. 1 Magnolia-Holbien, Sur. 35, Arriba grant. Cg. 3,846 ft.

Theo. Hicks et al No. 1 Kohler, C W¼ sec. 9, Novacitas grant. Loc.

Jim Wells County

Edwin M. Jones No. 1 Robt. Adams, 446 ft. S and W lines, Blk. 47, Waldron Oil & Gas Subd., Adams ranch. Sd. 4,703-26 ft., odor oil. D.S.T. showed mud cut with oil; trying to blow out from unknown depth.

R. A. Graddy No. 1 Bennett, 330 ft. N and W lines, Lot 87, sec. 76. Spudded, S.D.

Gist & Graddy No. 1 Owens, 660 ft. N line, midway E and W lines, Sur. 151. S.D. 1,927 ft.

Karnes County

R. L. Barnett No. 1 fee, NE cor. 568-ac. tr. Drlg. 1,473 ft.

DeGraffe & Reele No. 1 Cochran, 480 ft. E line, 160 ft. S line, McConnell League. R.U. and S.D.

Worth Oil Co. No. 1 Hysaw, 1,070-acre tract, Sequin grant. M.I. rotary.

LaSalle County

Kennedy & Johnston No. 1 Gilman & Wildenthal, 330 ft. NW and NE lines, 140-a. tr., Sur. 283. Derrick.

Hartmangruder Drlg. Co. (Paul Meador) No. 1 Reed, sec. 136. S.D. 2790 ft.

W. H. Vernon No. 1 Las Abias ranch, 150 ft. N line, midway E and W lines, sec. 726. Loc.

Live Oak County

Dirks Bros. No. 1 Nichols, 790 ft. S line, 365 ft. W line S. Ryan Sur. A-35. Drlg. 1,100 ft.

O. Dovre No. 1 San Antonio Joint Stock Land Bank, 150 ft. N line, 725 ft. E line, Plat 27, Tips Subd., Everett Sur. Drlg. 720 ft.

J. J. McRoberts No. 1 Mahoney, 3,100 ft. SW Junction Three Rivers, Tilden High-way and Thomas Henry Sur. lines, 150 ft. N. Drlg. 572 ft.

Windsor Oil Co. No. 1 B. E. Stolte, cen. tr., Wm. Kundy, 3,690-ac. blk. D.&A. 3,509 ft.

McMullen County

R. J. Hill No. 1 Richardson, 990 ft. E line, 1,650 ft. N line, Sur. 158. Drlg. 1,-852 ft.

C. I. Jennings No. 1 Regan, 1,070 ft. S. Frio River, 330 ft. W line, 642-a. tr., Haley Grant. Set sur. csg. W.O.C.

Rainer Oil Co. No. 1 Hagist, 330 ft. S and W lines, SW¼, SE¼, Sur. 25. D.& A. 2,505 ft.

Ranch Oil Co. No. 1 La Chusa, 330 ft. N and W lines, SE¼, Sur. 52. Loc.

C. C. Shumway No. 9 Shiner, 330 ft. N & W lines, NE¼ sec. 51. R.U.

Nueces County

V. L. Blanchard No. 1 T. H. Isensee, 330 ft. N and E lines, Blk. 3, R. Schaffer Lands Subd. T.D. 5,910 ft.; D.&A.

W. D. Hines No. 1 Flato, NW cor. Dris-coll Townsite. Resume drlg. 5,572 ft.

M. F. Hurlburt No. 1 Phillips, sec. 8, Flour Bluff Garden Tracts. T.D. 7,503 ft.; W.O.C.

O. W. Killam No. 1 Ellick, 330 ft. N and E lines tr., sec. 109, Paul Subd. P.B. 3,274 ft.; perf. 3,256-68 ft.; comp. gasser on ¼-in. ck.; closed in; C.P. 1,450 lbs.

Terminal Oil Prod. Co. No. 1 Thurman, 660 ft. N and W lines, SW¼, sec. 10. Cg. 6,050 ft.

Milam County

J. C. Kilgore No. 1 Newton, J. Reed Sur. Drlg. 1,829 ft.

San Patricio County

Atlantic Oil Prod. Co. No. 1 Maryland Trust Co., cen. W½, Lot 11, Blk. 42, McCampbell Subd. M.I.M.

Benedum & Trees Oil Co. No. 2 Welder sec. 19. T.D. 7,015 ft.; B.P. 5,710 ft.; swbg. some oil.

Benedum & Trees Oil Co. No. 3 Welder, 2,259 ft. E line, 940 ft. S line, sec. 19, Welder Ranch Subd. D.&A. 6,139 ft.

C. B. Bunte No. 1 Mayfield, 121 ft. W line, 237 ft. N line, Tr. 11, Ross Subd. R. U. and S.D.

O. W. Killiams No. 1 Green, 150 ft. E and NW lines tract, Geo. H. Paul Subd. M.I.M.

Joe Lundins No. 1 Welder, 330 ft. N and W lines, sec. 30, Paul Subd. Drlg. 3,724 ft.

Plymouth Oil Co. No. 2-D Welder, 466 ft. N and E lines, sec. 4. Drlg. 2,519 ft.

Portilla Oil & Gas Co. No. 1 Welder, 466 ft. E line, 2,333 ft. N line, sec. 5. T.D. 6,109 ft.; D.&A.

Taft Prod. Co. No. 1 Thomas, 150 ft. N & E lines, sec. 6, 2nd Addn. Taft Farm Lands. Drlg. 427 ft.

Starr County

J. F. Anderson No. 1 Yzagierre, Tr. 1, Porc. 79, J. of Camargo. Cg. 1,733 ft.

Porter Evans No. 1 Starr County Cattle Co., Lot 14, Evans Subd., Sh. 60, Porc. 89, J. of Camargo. Drlg. 267 ft.

Bishop & Henshaw No. 1 Martin, 660 ft. S line, 927 ft. W line, Sur. 627. S.D. 2,758 ft.

Coreta Oil Co. No. 1 Pena, 150 ft. S and E lines, Sh. 80, Porc. 81. T.D. 1,500 ft.; S.D.

Killam & Stagg, No. 2 Sanford Ricaby, Porc. 83, J. of Camargo. T.D. 2,505 ft.; D.&A.

Larkin & Warr No. 1 Kelsey-Bass, 533 ft. N line, 408 ft. E line, Lot 8, Porc. 87. S.D. 5,005 ft.

Ed Leach No. 2 Wood Est., Por. 84, J. of Camargo (old Weyel No. 1 Wood) W.O. T.D. 2,160 ft.; reworking.

Sun Oil Co. No. 1 Guerra & Sons, Blk. 25, Porc. 55. Drlg. 57 ft.

Webb County

French Oil Co. No. 1, S. Benavides Sur. No. 2,254. D.&A. 2,242 ft.

Ohio Fuel Oil Co. No. 1 D.C.R.C., 330 ft. S and W lines, Lot 16, Zapata School Lands Sur. 4. Drlg. sdy. l. 2,005 ft.

Starr Dev. Co. No. 1 Benavides, Sur. 173. Spudded in.

Willacy County

M. E. Morton et al No. 1 Santa Rosa, 330 ft. N and E lines, Lot 12, Blk. 31, Santa Rosa Subd., Sh. 44. Loc.

Shell Pet. Corp. No. 1 Yturria Land & Cattle Co., 990 ft. S and E lines, Share 64, San Juan de Carricitos gr. Drlg. 6,-003 ft.

Wilson County

A. G. Reimenschneider No. 2 L. Harrell, 750 ft. NE line, 2,800 ft. NW line, Barrera Sur. Fsg. 740 ft.

Zapata County

Ivan Howard No. 1 Martinez, 330 ft. NE and NW lines, Sur. 241. T.D. 2,511 ft.; D.&A.

O. J. Perren No. 1 Uribe, 330 ft. NE line, 327 ft. SE line, Blk. 31, Borrego grant. Loc. abd.

Zavalla County

Bay Oil Co. No. 1 Nat. Bank of Commerce, sec. 43, A.B.&M. Sur. P.B. 6,505 ft. to 6,250 ft.; rng. tbg.; T.D. 6,585 ft.; to test brkn. chalk; S.O.

Frank Buttram No. 1 Whitecotton, 2,400 ft. N line, 300 ft. W line, A.B.&M. Sur. Resumed drlg. 5,510 ft.

S. W. TEXAS PROVEN

Dirks—Bee County

Dirks Bros. No. 7 Harris, 65-acre tract, J. S. Dugat Sur. Set csg. on sd.; W.O.C.

Ray—Bee County

N. V. Duncan No. 3-A Campbell, B.&B. Sur., Abst. 139. Stdg.; T.D. 3,978 ft.

Sunburst Oil Co. No. 1 Ray, W. B. Blanch-ard Sur. Sd. 3,926-29 ft.; T.A.

Alta Verde—Brooks County

Fairway Prod. Co. No. 1 Singer, Sur. 312. T.D. 921 ft. Cap rock. Stdg.

Starr Dev. Co. No. 1 Singer, Sur. 436. T.D. 1,640 ft. P.B. 830 ft. Perf. 811-18 ft. comp.; 3,000,000 ft. gas.

Dick Young No. 5 Singer, Blk. 12, Sur. 312. Set csg. 40 ft. T.D. 100 ft. W.O. orders.

Salt Flat—Caldwell County

Louis Crouch No. 1 Davis, A. Floyd Sur. Comp. on pump; 80 B.P.D.; T.D. 2,680 ft.

Driscoll—Duval County

Continental Oil Co. No. 9-A Sevier, Sur 23. P.B. 3,305-48 ft. from 3,414 ft. to test sd.

Government Wells—Duval County

Magnolia Pet. Co. No. 7 Bryan White, sec. 49. T.D. 2,347 ft.; D.&A.

Morris Stein No. 1 Hahl, 160-ac. tract, Sur. 47. Spudded. S.D.

J. T. Stover No. 1 Hester, 330 ft. S and E lines, SW¼, NE¼, Sur. 47. Corrected depth 1,300 ft. S.D.

Hoffman—Duval County

Duval Oil Corp. No. 4 Hoffman, sec. 118. Sd. 2,842-56 ft.; comp. 491 B.P.D.

Duval Oil Corp. No. 5 Hoffman, Sur. 118. Drlg. 1,020 ft.

W. C. McBride No. 1 Cuellar, Sur. 138. T.D. 2,965 ft.; D.&A.

W. D. Maston No. 1 Ruiz, Sur. 128. Perf. 2,604-10 ft.; no show; D.&A.; T.D. 3,003 ft.

Plymouth Oil Co. No. 2-B Hoffman, Sur. 118. Comp.; 279 B.P.D. on ½-in. ck.; sd. 2,909-16 ft.

Rogers & Rogers No. 3 Hoffman, Sur. 118. Set csg. 2,881 ft.; W.O.C.

Rogers & Rogers No. 3 Sutherland, 500 ft. W of No. 1, 330 ft. S line, sec. 130. T.D. 2,900 ft.; comp.; 10 B.P.H.

Rogers & Rogers No. 4 Sutherland, E½, Sur. 120. Sd. 2,895-2,900 ft.; drlg. plugs.

Standard of Kansas No. 5 Hoffman, Sur. 118. Cg. 2,882 ft.

N. Kohler—Duval County

Mills Bennett Prod. Co. No. 3 Peters, 980 ft. N line, 330 ft. W line ,Sur. 178. Skidding on.

Navarro Oil Co. No. 1 Peters, Sur. 39. Sd. 1,780-90 ft.; sd. tstd. gas; T.D. 2,364 ft. S.D. for water.

Labbe—Duval County

Stanolind O. & G. Co. No. 5 Farmers Life Ins., Sur. 416, 660 ft. S and E No. 1. M. I. M.

Loma Novia—Duval County

Bridwell Oil Co. No. 9-A Hubbard, Sur. 71. Comp.; 240 B.P.D. on ¼-in. ck.; sd. 2,773-95 ft.

Bridwell Oil Co. No. 1-D Hubbard, sec. 73. Comp.; 295 B.P.D.; sd. 2,525-51 ft.

Bridwell Oil Co. No. 11-C Hubbard, Sur. 75. Comp.; 260 B.P.D.; sd. 2,569-87 ft.

Claude Hamil Co. No. 18 Hubbard, Sur. 77. Sd. 2,672-92 ft.; comp.; 456 B.P.D. on ½-in. ck.; T.D. 2,696 ft.

Duval Oil Corp. No. 4 Ruiz, Sur. 118. R.U.

Humble O. & R. Co. No. 42-B Hubbard, Sur. 72. T.D. sdy. sh. 2,739 ft.; set csg. 2,713 ft.; swbg. in.

Humble Oil & Refining Co. No. 43-B Hubbard, Sur. 83. Comp.; no gauge; sd. 2,719-36 ft.

Humble Oil & Refining Co. No. 58-B Hubbard, Sur. 83. Drlg. sdy sh. 2,582 ft.

Humble O. & R. Co. No. 59-B Hubbard, Sur. 72. Comp. on pump; no gauge; T.D. 2,762 ft.

Humble O. & R. Co. No. 13 Ruiz, Sur. 553. Sd. 2,740-49 ft.; swbg. in.

Magnolia Petroleum Co No. 31 Hahl, Sur. 67. Comp. 25 B.P.H. on ½-in. ck.; T.D. 2,593 ft.

Magnolia Petroleum Co. No. 40 Hahl, Sur. 67. Comp.; 20 B.P.H. on ½-in. ck.; T.D. 2,619 ft.

Magnolia Pet. Co. No. 41 Hahl, Sur. 67. Comp.; 240.88 B.P.D. on ½-in. ck.; sd. 2,662-78 ft.

Magnolia Pet. Co. No. 42 Hahl, Sur. 67. Comp.; 10 B.P.H. on ½-in. ck.; T.D. 2,696 ft.

Magnolia Pet. Co. No. 43 Hahl, Sur. 67. Drlg. 2,525 ft.

Magnolia Pet. Co. No. 44 Hahl, Sur. 67. Loc.

Shell Petroleum Corp. No. 4 Bishop, Sur. 59. Sd. 2,535-49 ft.; comp.; 12.05 B.P.H.; T.D. 2,558 ft.

Shell Pet. Corp. No. 27 Hubbard, Sur. 77. Sd. 2,713-28 ft.; comp.; 8.03 B.P.H.; T.D. 2,728 ft.

Shell Pet. Corp. No. 28 Hubbard, 1,626 ft. W line, 1,913 ft. S line lse., Sur. 77. M.I.M.

Shell Pet Corp. No. 29 Hubbard, 989 ft. E line, 1,086 ft. N line lse., Sur. 77. Loc.

Shell Pet. Corp. No. 9 Mendoza, 1,034 ft. S line, 990 ft. W line lse., Sur. 68. Set Surf. csg. 45 ft.; W.O.C.

Texas Co. No. 15 B.C.C., Sur. 59. T.D. 2,537 ft.; sd. 2,523-37 ft.; comp. 120 B.P.D.

Texas Co. No. 46 Wendt, Sur. 68. Prep. run tbg. 2,663 ft.

Loma Vista—Duval County

Atlantic Oil Prod. Co. No. 1 J. F. Welder hrs., 330 ft. N and E lines, 160-ac. tr., Sur. 103. Loc.

Pan American Pet. Co. No. 1-H Welder, 330 ft. N and W lines, 160-ac. tr., Sur. 103. Loc.

Piedra Lumbre—Duval County

Magnolia Pet. Co. No. 5 D.C.R.C., Sur. 95. T.D. 1,962 ft.; comp. 8 B.P.H. on ⅜-in. ck.

Magnolia Pet. Co. No. 6 D.C.R.C., 990 ft. N line, 330 ft. W line, Sur. 95. Loc.

Peters—Duval County

Mills Bennett Prod. Co. No. 3 Peters, 980 ft. N line, 330 ft. W line, Sur. 178. Drlg. 1,957 ft.

Navarro Oil Co. No. 1 Peters, 330 ft. S and E lines, W 480-ac. tr., Sur. 39. Cg. sd. 2,652 ft.

Palangana—Duval County

Frank Granis No. 3-A Scharlett, Sur. 255. M.I. rig.

Seven Sisters—Duval County

Atlantic Oil Prod. Co. No. 3-E Welder, Sur. 102. T.D. 2,419 ft.; W.O.C.

Atlantic Oil Prod. Co. & Darby Pet. Corp. No. 2-G Welder, Sur. 102. T.D. 2,437 ft. comp.; 2,000,000 ft. gas with spray oil.

Blanco Oil Co. and Buchanan No. 13-A Welder, E½, SW¼, Sur. 385. Drk.

S. B. Cloyes No. 1 Serna, 330 ft. N and E lines tr., Sur. 384. Loc.

Cox & Hamon No. 1 Telford, NW¼, Sur. 386. Loc.

Darby Petroleum Corp. No. 1 Welder, 120-ac. tr., Sur. 102. Sd. 2,418-37 ft.; comp.; est. 250 B.P.D.; T.D. 2,437 ft.

Dulce Henderson & Harvey No. 1 Hagist, Sur. 271. Sd. 2,415-25 ft.; tstd. mud; D. &A.; T.D. 2,601 ft.

Humble O. & R. Co. No. 4 Badgley, Sur. 307. Sd. 2,516-28 ft.; comp. on pump; no gauge.

Humble O. & R. Co. No. 5 Badgley, Sur. 307. Sd. 2,524-32 ft.; set csg. 2,514 ft.; W.O.C.

Humble O & R. Co. No. 12-B Serna, Sur. 384. T.D. 2,185 ft.; showed S.W. and gas; flowing by heads.

Humble O. & R. Co. No. 14 Smith, Sur. 382. Loc.

Humble O. & R. Co. No. 15 Smith, Sur. 382. Sd. 2,428-38 ft.; comp. in pits.

Humble O. & R. Co. No. 11-B Serna, Sur. 384. Drlg. 1,403 ft.

Illinois Petroleum Co. No. 2 Hazelwood, Sur. 110. Comp. 10 B.P.H.; T.D. 2,500 ft.

Chas. Kleiner No. 1 Chernosky, Sur. 226. Drlg. 2,023 ft.

Mid-Continent Pet. Corp. No. 8 Serna, Sur. 384. Sd. 2,199½-2,208 ft.; tstg.

Mid-Continent Pet. Corp. No. 9 Serna, Sur. 384. Drlg. 2,031 ft.

Navarro Oil Co. No. 6 Welder, Sur. 383. M.I.M.

Pan American Prod. Co. No. 3-C Welder, Sur. 383. Sd. 2,461½-68 ft. D.S.T. 1,000 ft. oil in 15 min. Set csg. W.O.C.

Parr Oil Co. No. 1 Welder, Sur. 102. Drlg. 2,314 ft.

Parr Oil Co. No. 4 Welder, Sur. 383. Sd. 2,443-53 ft.; comp.; jetting 211 B.P.D.; T.D. 2,453 ft.

Reliance Oil & Royalty and H. H. Henderson No. 4 Drummond, Sur. 308. Comp. 749.6 B.P.D.; sd. 2,487-2,503 ft.

Santa Clara Oil Co. No. 8-B Welder, Sur. 383. Comp.; 24.08 B.P.H. on ⅝-in. ck.; sd. 2,462-81 ft.

Texas Co. No. 2 Badgley, Sur. 307, M.I.M.

Westheimer & Daube No. 12 Campos, Sur. 224. Cg. 2,559 ft.

Pearsall—Frio County

Amerada Pet. Corp. No. 7 Haiff & Oppenheimer, 1,320 ft. W line, 330 ft. S line, J. H. Gibson Sur. No. 16. T.D. 3,926 ft.; P.B. 3,877 ft.; W.O.C.

Amerada Pet. Corp. No. 2 Michael, 511 ft. N line, 466 ft. W line, A. Lynch Sur. 321. Drlg. sdy. sh. 2,440 ft.

Amerada Pet. Corp. No. 1 Miller, 466 ft. NE and SE lines tr., B. Saltillo Sur. Drlg. hd. sh. 3,645 ft.

Amerada Pet. Corp. No. 3 Smith, 466 ft. E line, 905 ft. N line, J. B. Mason Sur. 322. Drlg. 743 ft.

Combs & Oakes No. 1 Arp, 330 ft. S and E lines, 102-ac. tr., S. Blair Sur. 297. Top chalk 5,507 ft. Saturation cored 5,-535-55 ft.; T.D. 5,870 ft.; prep. run csg.

North Pettus—Goliad County

Bostex Oil Co. No. 1 Lackey, 1,650 ft. NW line, J. Gomez Sur., 1,650 ft. SW of No. 3-A. Loc.

Jane Oil Co. No. 3-B Gillette, 810 ft. SE No. 2-B, cen. N and S lines, J. Gomez Sur. Set csg. 3,668 ft.; sd. 3,668-71 ft.; comp.

Jane Oil Co. No. 1 Runge State Bank, 990 ft. SE line, 150 ft. SW line, J. B. Myers Sur. Sd. 3,711-17 ft.; comp.; 397 B.P.D. on ¼-in. ck.

Jane Oil Co. No. 2 Runge State Bank, tr. 6, J. B. Myers Sur. Sd. 3,112-17 ft. **Rng. csg.**

Jane Oil Co. No. 3 Runge State Bank, 330 ft. NE and SE lines, G. B. Meyers Sur. R.U.

Magnolia Pet. Co. No. 1 Gillette, 137 ft. SW line lse., 1,650 ft. NW line, J. Go-mez Sur. Set csg. 3,860 ft.; sd. 3,670-80 ft.; comp.; 320 B.P.D. on ¼-in. ck.

Magnolia Pet. Co. No. 2 Gillette, J. Gomez Sur. Set csg. 225 ft.; W.O.C.

Magnolia Pet. Co. No. 3 Welden & Sackey, J. Gomez Sur. Drk.

Sun Oil Co. No. 6 Scarborough, E. Talley Sur. Sd. 3,632-40 ft.; comp.; 48 B.P.D. on ¼-in. ck.; T.D. 3,653 ft.

Mercedes—Hidalgo County

Union Sulphur Co. No. 7 American Rio Grande L. & I. Co., 4,000 ft. SE of No. 1 Farm Tr. 2,309, Blk. 59. T.D. 7,597 ft.; P.B. 7,510 ft.; no show; drld. to 7,510-70 ft.; to test sd. 7,587-93 ft.

Union Sulphur Co. No. 8 American Rio Grande L. & I. Co., 660 ft. N & E lines Tr. 2,120, Blk. 87. Perf. 7,449-60 ft.; little S.O.; set whipstock and 5½-in. csg. on sd. 2,454-58 ft.; rng. tbg.

Union Sulphur Co. No. 9 American Rio Grande L. & I. Co., Farm Tr. 1,375, Blk. 59. T.D. 7,658 ft.; D.&A.

Samfordyce—Hidalgo County

J. T. Barlow No. 1 Marta Flores de Chapa, Tr. 250, Porc. 39 (W.O.). P.B. and set csg. 2,955 ft.; W.O.C.

Barnett Pet. Corp. No. 3-A Sheldon, Tr. 11, Porc. 41. T.D. 2,645 ft.; S.D.

Weekly Oil Corp. No. 2 Lula George, Tr. 12, Porc. 41. Cored a.w. sd. 2,780-84 ft. T.D. 2,784 ft.; D.&A.

G. W. Wheeler No. 1 F. Farias, Tr. 255, Porc. 39. Spudded and S.D.

G. W. Wheeler No. 2 Felipe Farias, Tr. 255, Porc. 39. Perf. 2,832-51 ft.; comp. est. 200 B.P.D.

Bentonville—Jim Wells County

La Jita Corp. No. 1 Erck, 330 ft. N & E lines, N½, sec. 75. M.I.M.

La Jita Corp. No. 1 Pope, 660 ft. S and E line, sec. 20, King Farm Lots. D.S.T. 5,340-51 ft.; 12-min.: 175 lbs. W.P.; 120 ft. P.L.O. and 390 ft. oil cut with mud, mostly oil; rng. tbg.

Stanolind O. & G. Co. No. 1 Frame & Bowers, 330 ft. S & E lines, sec. 14. Cg. 4,537 ft.

Stanolind O. & G. Co. No. 1 Raney, 330 ft. N and E lines, sec. 16. Sd. 5,364½-76 ft.; comp. 192 B.P.D. on 11/64-in. ck.

Stanolind O. & G. Co. No. 1 Sain, 330 ft. S and W lines, sec. 18. T.D. 5,850 ft.; P.B. 4,900 ft.; 15-min. D.S.T. 4,870-4,900 ft.; 1,729 ft. brackish wtr.; W.O.

Stanolind O. & G. Co. No. 1 Thompson, 330 ft. N and W lines, NE¼ sec. 4. Drlg. hd. sd. 5,142 ft.

Texon and Lucey No. 1 Dodd, 330 ft. S and E lines, sec. 15, R. King Farm Lots Subd. T.D. 6,500 ft.; P.B. 4,033 ft.; 10-min. D.S.T., 4,005-10 ft.; 125 ft. mud; stdg.

Lucas—Live Oak County

Houston Oil Co. No. 35 Cartwright, 800 ft. NE R.R., 2,440 ft. NW No. 33. No report.

Calliham—McMullen County

Lightfoot Oil Co. No. 1 Lark, Blk. 118, Scrugham Sur. Recementing 1,058 ft.

Loma Oil Co. No. 3-F Jacob, 660 ft. W of No. 1, Jacob Sur. M.I.M.

Rhode—McMullen County

Humble O. & R. Co. No. 2 Rhode, 330 ft. S and W lines, Sur. 17. R.U.

Agua Dulce—Nueces County

Parker, Foran & Knode No. 1 J. G. Ingram, sec. 9, Ross Peters Subd. No. 2. Set 10¾-in. csg. 490 ft. W.O.C.

Texon Royalty Co. No. 1 Elliff, 466 ft. E line, 2,194 ft. S line tr., Longorio grant. Drlg. 3,545 ft.

Saxet Heights—Nueces County

Capitol Oil Co. No. 1 Corpus Christi Ind. School Dist., Fairview School Survey. Set csg. 4,088 ft.; perf. 4,085-88 ft.; rng. screen and lnr.

W. W. Chapman No. 1 Mrs. J. A. Walsh, 180 ft. SW line, 83 ft. NW line tr., Country Club Addn. Set csg. 4,082 ft.; sd. 4,070-82 ft.; comp.

Cherokee Oil Co. No. 1 Morris, Bancroft Farm Lots. Sd. 4,067-73 ft.; comp.: no gauge.

Circle Oil Co. No. 2 Pete Whelan, 330 ft. N line, 225 ft. E and W lines, 53.7-ac. tr. Set surf. csg.; W.O.C.

J. K. Culton No. 3 Cantwell, 1,295 ft. S line, mid E and W lines, 27.5-ac. tr., Metes & Bounds Sur. Set csg. 4,084 ft.; W.O.C.

A. C. Erwin No. 3 fee, Cen. Blk. 1, Oak Park Addn. Sd. 4,057-96 ft.; set csg. 4,126 ft.; W.O.C.

Ewing & Downey No. 1 Best, 5-ac. tr., Ehlers Garden Tracts. Set csg. 500 ft.; W.O.C.

Federal Oil Co. No. 1 C. R. Priour, cen. Blk. 15, Oak Park Addn. M.I.M.

Tom Graham No. 1 Haug, Lots 6 and 7, Ellendale Gardens No. 2. Drlg. plugs; T.D. 4,086 ft. Comp. gasser. Recementing.

Houston Oil Co. No. 1 McBride, 94.98-ac. tr., Villareal Sur. Drlg. 3,723 ft.

Marine Oil Co. No. 1 Geistman, 250 ft. NE line, 185 ft. NW line, 9.63-ac. tr. Set surf. csg.; W.O.C.

Maryland Oil Co. No. 1 Villa Gardens, Blk. 12, Villa Gardens Subd. Drlg. 1,020 ft.

Morgan Bros., Inc., No. 1 Bender, cen. .75-ac. tr., Blk. D, Harbor View Addn. Set surf. csg.; W.O.C.

Morgan Bros., Inc., No. 1 Dodson, cen. ½-ac. tr., Blk. 12, Bancroft Farm Lots. Drk.

Pedernal Oil Co. No. 1 Pondrom, Lot 11, Country Club Place. Drlg. 3,615 ft.

Pedernal Oil Co. No. 2 Priour, Blk. 16, Oak Park Addn. Sd. 4,060-75 ft.; comp. 12 B.P.H. on ¼-in. ck.

Port Oil & Gas Co. No. 4 Country Club, Lot 20, Villareal Sur. Sd. 4,074-86 ft., reperforated 4,081-85 ft.; comp; no gauge.

Renwar Oil Corp. No. 1 Guaranty Title & Trust Co., Lot 9, Blk. 12, Villa Gardens. Perf. 4,084-86 ft.; flowing in pits .

Renwar Oil Co. and Maryland Corp. No. 1 Kaler, Villareal Sur. Tstg. sd. 4,044-50 ft.

W. A. Richardson No. 2 Edwards, 10-ac. tr., Villareal Sur. Drk.

Richardson Petroleum Co. No. 1 Priour, Lot 1, Oak Park Addn., R.U.

Reed & Spiller No. 1 Harmon & Flood, 180 ft. N line, 2-ac. tr., Ellendale Gar-dens No. 1. Comp.; 135 B.P.D. on ½-in. ck.; perf. 4,075-82 ft.

Saxet Prod. Co. No. 2 Uehlinger, 303 ft. S line, 181 ft. E line, 10-ac. tr. Skidding on rig.

Simon et al No. 1 Bagnall, Harbor View Addn., testing 4,065 ft.

Taylor Ref. Co. No. 2 Corpus Christi Coun-try Club, 250 ft. SW line, 1,005 ft. SE line, 73-ac. tr. Sd. 4,066-70 ft.; comp. 70 B.P.D. on 7/32-in. ck.; perf. 4,063-65 ft.

Taylor Ref. Co. No. 3 Corpus Christi Golf & Country Club 73-ac. tr. Skidding on.

Taylor Ref. Co. No. 1 fee, 990 ft. S line, mid E and W lines, 10-ac. tr. Sd. 4,071-78 ft.; set csg.; W.O.C.

Taylor Ref. Co. No. 2 fee, Villareal Sur. Comp.; 288 B.P.D. on 11/64-in. ck.; T.D. 4,078 ft.

Westgate Oil Co. No. 5 Sturm Estate, 83-ac. tr. Comp.; no gauge; sd. 4,080-85 ft.

Winn Drlg. Co. No. 1 Starr, 125 ft. NW line, 150 ft. SW line, 3.39-ac. tr., Blk. 11, Bancroft Farm Lots. Top sd. 4,068 ft.; set csg. 4,077 ft.; Stdg.

Saxet—Nueces County

W. W. Chapman No. 2 Morgan, 660 ft. W No. 1 Morgan, 322-ac. tr., Sur. 405. Drlg. 3,276 ft.

W. W. Chapman No. 1 M. B. Humphrey, 330 ft. N & W lines, 20-ac. tr., J. W. Stevens Sur. 406. Drlg. 4,452 ft.

Coastland Oil Co. No. 1 Page Bros. (workover). Sd. 5,741-58 ft.; 5-min. D.S.T. 5,-740-57 ft.; 22 fourbles gasoline and mud; W.P. 450 lbs.; set csg. 5,757 ft.; W.O.C.

Conroe Drlg. Co. No. 2 Frank Bliss, J. W. Stevens Sur. 406. Sd. 5,803-30 ft.; set csg. 5,830 ft.; W.O.C.

Conroe Drlg. Co. No. 3 Bliss, 330 ft. N and W lines, 105-ac. tr., Stevens Sur. Pits.

Conroe Drlg. Co. No. 5 Bliss, 330 ft. N line, 1,085 ft. W line, 105-ac. tr., Stevens Sur. Pits.

Conroe Drlg. Co. No. 1-A Rand Morgan, 990 ft. E line, 330 ft. N line, Sur. 403. Drlg. 4,950 ft.

Conroe Drlg. Co. No. 1-B Rand Morgan, 330 ft. N line, 990 ft. E line lease, Sur. 403. Sd. 6,293-6,308 ft.; D.S.T. 6,299-6,-308 ft.; 12 to 15 ft. gasoline and mud; W.P. 220 lbs.; cg. 6,357 ft.

Conroe Drilling Co. No. 1-C Rand Morgan, 990 ft. E line, 330 ft. N line, lease, Sur. 403, R.U.

Gilcrease Oil Co. No. 1 Sullivan, 330 ft. N and E lines, 140.13-ac. tr., Thos. Gal-lager Sur. Cg. 4,156 ft.

L. Glasscock No. 1 Glover Johns, W. S. McGregor Sur. 582. Sd. 5,807-17 ft.; D.S. T. 5,807-17 ft.; 630 ft. P.L.O. in 6 min.; W.P. 90 lbs.; set csg. 5,807 ft.; W.O.C.

Great States Oil Co. No. 2 Humphreys, 988 ft. W line, 330 ft. S line, Stevens Sur. 406. Location.

A. F. Holliday No. 3 Griffith, 330 ft. N and E lines, 99.79-ac. tr., Frank Sur. 416. Sd. 5,816-30 ft.; comp. 190 B.P.D. on ⅛-in. ck.; T.D. 5,830 ft.

A. F. Holliday No. 4 Griffith, 330 ft. N line, 1,047 ft. W No. 3, Franks Sur. 416. Drlg. 4,027 ft.

A. F. Holliday No. 4 Hutchins-Stillwell, 330 ft. S and W lines, Blk. 30, Shep-pard Farm Lands. Sd. 5,818-30 ft.; set csg. 5,830 ft.; W.O.C.

A. F. Holliday No. 3 Hutchins, sec. 30. Blew out and ran wild; controlled; washing down to 4,270 ft.

Houston Oil Co. No. 4 Harrell, Blk. 19, Sheppard Farm Lots. Drlg. 3,601 ft.

Houston Oil Co. No. 1 McGregor, 990 ft. N line, 1,450 ft. W line, Sur. 311. (Workover) Derrick.

Houston Oil Co. No. 2 McGregor, Sur. 311 (rework). Recomp.; est. 100 B.P.D. on ¼-in. ck.; sd. 5,818-38 ft.; deepened 8 ft.

Houston Oil Co. No. 11 Rand Morgan, sec. 7, Rge. 5. Sd. 4,876-86 ft.; comp.; no gauge.

Frank Jones No. 1 Carson, 330 ft. N line, 800 ft. E line, Sur. 500 (old Viola No. 1) workover. T.D. 4,902 ft. R.U. to deepen.

Mills Bennett Prod. Co. No. 1 Ordner, 330 ft. S and E lines, 210-ac. tr., Sur. 410. Sd. 4,100-10 ft.; tstd. 650 ft. oil; drlg. 4,857 ft.; to go to 5,800-ft. sd.

Morgan Gulf Oil Co. No. 4-A Rand Mor-gan, 330 ft. N line, 1,650 ft. E line, B.S.&F. Sur. 403. Sd. 5,806-24 ft.; comp.; no gauge.

Morgan Gulf Oil Co. and Great States Oil Co. No. 1 Humphreys, 330 ft. S line, 990 ft. W line, Stevens Sur. 406. Sd. 5,-812-22 ft.; rng. csg.

North Star Oil Co. No. 2 Bliss, 990 ft. N & W lines, 109-ac. tr., Stevens Sur. 406. Drlg. 3,635 ft.

North Star Oil Co. No. 2 Rand Morgan, 330 ft. S line, 1,650 ft. E line, B.S.&F. Sur. 405. Sd. 5,789-5,833 ft.; set csg.; W.O.C.

North Star Oil Co. & Morgan Gulf Oil Co. No. 1-G Rand Morgan, 330 ft. N line, 250 ft. E line, Sur. 403. Spudding in.

North Star Oil Co. No. 2-G Rand Morgan, 910 ft. E line, 330 ft. N line, B.S. &F. Sur. 403. Set surf. csg. 1,000 ft.; W.O.C.

Phillips Pet. Co. No. 3 Hutchins, 330 ft. N and W lines, Blk. 19, Sheppard Farm Lots. Sd. 5,808-26 ft.; set csg. 5,826 ft.; W.O.C.

Phillips Pet. Co. (Paul Benedum) No. 2 Morgan, Sur. 405 (old Gibson O. & G. Co. test). T.S. 5,786 ft.; D.S.T. 5,816-26 ft.; 600 ft. P.L.O.; 3 min.; W.P. 100 lbs.

W. A. Richardson No. 1 W. S. Hutchins (workover), 330 ft. S and E lines, 80-ac. tr., Sh. 2, Frank Sur. 416 Sd. 5,831-98 ft. Tested s. w. W.O. orders.

Richardson Petroleum Co. No. 4 Perkins & LaGasse, 330 ft. W lines, 296 ft. N line, Blk. 26, Sheppard Farm Lots, Sur. 406. Cg. 4,550 ft.

Richardson Petroleum Co. No. 3 Quiros, 660 ft. E of No. 2. Drlg. 3,087 ft.

Shell Pet. Corp. No. 3 Fiato, 330 ft. E and S lines lease, 40-ac. tr., I. Dunn Sur. Sd. 4,543-48 ft.; set csg. 4,496 ft.; bringing in with gas.

Sinclair Prairie Oil Co. No. 2 Isensee, 330 ft. S and E lines, 80-ac. tr., C. Land Sur. 404. T.D. 4,960 ft.; rng. Schlumberger test.

Southern Minerals Corp. No. 5 Bliss, S offset Conroe No. 1 Bliss. Drlg. 5,237 ft.

Southern Minerals Corp. No. 6 Bliss, S offset Holliday No. 2 Griffith. Drlg. 5,792 ft.

Southern Minerals Corp. No. 7 Bliss, 330 ft. S and W lines tr., Stevens Sur. Drlg. 274 ft.

Southern Minerals Corp. No. 5 Isensee, 330 ft. N and W lines tr., Sur. 404. Set sur. csg. 1,200 ft.; W.O.C.

Southern Minerals Corp. No. 2 Mastin, 125-ac. tr., G. Frank Sur. 416. Sd. 5,748-60 ft.; set csg. and perf. 5,751-55 ft.; comp.

Southern Minerals Corp. No. 7 Smith, 330 ft. S and E lines, 120-ac. tr., Blk. 4, Sheppard Farm Lots. Drlg. 3,620 ft.

Texon Drilling Co. No. 2 Isensee, 150 ft. N line, 113 ft. W line, 13.44-ac. tr., C. Land Sur. 404. Spudded.

Texon Drlg. Co. No. 2 Lingnau, 150 ft. N line, 113 ft. W line, 13.44-ac. tr., C. Land Sur. Drlg. 2,107 ft.

Texon Drlg. Co. No. 1 Scoggins, 125 ft. N line, 330 ft. W line lse., C.G.&S.F. Sur. 315. Cg. sd. 4,416 ft.

W. A. R. Oil Co. No. 1 Hutchins, 30-ac. tr., Sh. 2, Frank Sur. 416 (old Capps No. 1, workover). Sd. 5,881-93 ft., s.w. S.D. W.O. orders.

Warner Quinlan Co. No. 4 Isensee, Blk. 1, Sheppard Farm Lots. Drlg. 1,315 ft.

Wynne Drlg. Co. No. 1 Rand Morgan, 1,650 ft. N line, 330 ft. W line, 236.5-ac. tr., Sur. 315. Set sur. csg. 990 ft. W.O.C.

Plymouth—San Patricio County

Centennial Oil Co. No. 1 State of Texas, Tr. 2. Set 64 ft. conductor csg.; W.O.C.

Centennial Oil Co. No. 1 State of Texas, Tr. 3. M.I.M.

Centennial Oil Co. No. 2 State of Texas, Tract 3, 640 ft. S and 46 deg., 51 min. E of Plymouth O. Co. No. 23-C Welder. Drlg. 3,300 ft.

Plymouth Oil Co. No. 49-C Welder, 331 ft. N line, 1,107 ft. W line, sec. 49. T.D. 5,653 ft.; comp.; no gauge.

Plymouth Oil Co. No. 50-C Welder, 536 ft. S line, 1,427 ft. W line, sec. 50. Drlg. 5,872 ft.

Plymouth Oil Co. No. 51-C Welder, 1,169 ft. N line, 256 ft. E line, sec. 49. Cg. 5,457 ft.

Plymouth Oil Co. No. 52-C Welder, 280 ft. N line, 1,188 ft. E line, sec. 49. Set sur. csg. 350 ft. W.O.C.

Sun Oil Co. No. 3 Edgar, 466 ft. E line, 466 ft. N line lse., Blk. 1, sec. 34. Drlg. 5,217 ft.

Sun Oil Co. No. 1 Rosen, 466 ft. N line, **315 ft. W line tr., E½ W½ sec. 35, J.** Fessenden Sur. Set sur. csg. 387 ft.; W.O.C.

Taft Field—San Patricio County

Humble O. & R. Co. No. 3 Mayo, Tabor Sur. Sd. 5,919-24 ft.; O.S.

Humble O. & R. Co. No. 4 Mayo, Tabor Sur. Drlg.

Shell Pet. Corp. No. 2 Pullin, 705 ft. N line, 493 ft. E line lease, Blk. 4, 2nd Addn. Sd. 3,972-90 ft.; set csg. 3,972 ft.; W.O.C.

Guerra—Starr County

Sun Oil Co. No. 11-A Guerra, 3,077 ft. SE line, 3,360 ft. SW line, Sh. H-14-B, Las Cuevitas gr. M.I.M.

Margo—Starr County

Harter et al No. 2 Sanchez, 150 ft. S and W lines, 39.72-ac. tr., Sh. 72, Porc. 73, W.O.). T.D. 1,103 ft.; D.&A.

Rio Grande City—Starr County

Moss & Bass No. 1 Frank Doyno, Blk. 3, Tr. 77-A. Sd. 1,420-24 ft.; D.S.T. 1,420-24 ft.; flow gas and 90 ft. oil in 15 min.; W.P 125 lbs.

Sioux Oil Corp. No. 3 Frank Doyno, 150 ft. N and W lines, Blk. 3, Tr. 77-A, Porc. 81. M.I.M.

Lech Oil Co. No. 10 Frank Doyno, Blk. 4, Tr. 77-A, Porc. 81. Set csg. 1,453 ft.; W.O.C.

Samfordyce—Starr County

Sun Oil Co. No. 1 Garcia Land & Cattle Co., 330 ft. S and W lines, 200-ac. tr., W½, Porc. 100. Set surf. csg. 200 ft.; W.O.C.

Lopez—Webb-Duval Counties

Cox & Hamon No. 1 Peal, Sur. 796. Drlg. 620 ft.

Gem Oil Co. No. 1 Peal, Sur. 72. Loc.

Magnolia Pet. Co. No. 2 Peal, 660 ft. N of No. 1, Sur. 383. T.S. 2,099 ft.; set csg. 2,099 ft.; W.O.C.; sd. 2,099-2,106 ft.

Mills Bennett Prod. Co. No. 6 Valadez, Sur. 111. Comp. 435 B.P.D. on ½-in. ck.; sd. 2,205-12 ft.

Mills Bennett Prod. Co. No. 7 Valadez, Sur. 111. Comp.; 15 B.P.H.; jetting; T.D. 2,219 ft.

Mortimer & Springer No. 1 F. L. Garcia, Sur. 112. Sd. 2,208-28 ft.; comp. 15 B. P.H. on ½-in. ck.

Mortimer & Springer No. 2 F. Lopez, Sur. 112. Skidding on.

Mortimer & Springer No. 3 J. Lopez, Sur. 73. Drlg. 1,127 ft.

Mortimer & Springer No. 1 Peal, Sur. 72, Location.

Superior Oil Co. No. 10 Billings, Sur. 109. T.D. 2,259 ft.; tstg.; no show.

O'Hern—Webb County

Magnolia Pet. Co. No. 16 Seacord-Benavides, C Blk. 495, Hale Subd. T.D. 2,952 ft.; D.&A.

Magnolia Pet. Co. No. 9, Servando Benavides, C Lot 6, Blk. 174. Set csg. 2,824 ft.; W.O.C.

J. J. O'Hern No. 2-A Benavides, Blk. 493, Hale Subd. T.D. 2,903 ft.; D.&A.

Texia Oil Corp. No. 4-D Brennan Benavides, C Blk. 387, Hale Subd. Sd. 2,884-2,905 ft.; comp.; 202 B.P.D.

Escobas—Zapata County

B. W. Roscoe No. 4 Bustamante, Share 33. Sd. 1,380-88 ft.; S.D.; T.D. 1,388 ft.

Texas Co. No. 91 Whitehead, 629 ft. NE of No. 79, 629 ft. SE of No. 81, Cerrito Blanco gr. Loc.

Texas Co. No. 90 Whitehead, Cerrito Blanco gr. T.D. 1,278 ft.; comp.; 40 B.P.D.

Haynes—Zapata County

Clover Oil & Gas Co. No. 15 Haynes, Blk. 7, Haynes Subd. Comp.; 35 B.P.D.; T.D. 896 ft.

Gilcrease Oil Co. No. 3-B Haynes, Blk 4, Haynes Subd. Comp.; 35 B.P.D.; T.D. 954 ft.

Upchurch & McKay No. 4 Haynes, Blk 7, Haynes Subd. T.D. 852 ft.; comp.; 40 B.P.D.

E. C. TEXAS WILDCATS

Anderson County

Gulf Oil Corp. No. 1 Ross, Robt. Irwin Sur. Elev. 487 ft.; drlg. 6,312 ft.

Angelina County

Bill La Rue No. 1 Cameron Lbr. Co., I. Ray Sur. Top sd. 1,340 ft.; S.D. 1,354 ft.

Ginter et al No. 1 Cope hrs., Jose Moron Sur., 3 mi. E of Dibol. S.D. 2,030 ft.

W. A. Stone et al 1 Southern Pine Lbr. Co., B. J. Thompson Sur., 8 mi. SE Lufkin; R.U.

Cherokee County

T. J. Wood et al No. 1 Huggins, L. Jordan Sur., 3 mi. SW of discovery, or 7 mi. SW of Rusk. T.S. 5,182 ft.; T.D. 5,186 ft.; set csg.; flwd. oil, mud and S.W.

Franklin County

E. Bateman et al No. 1-E Phillips, 150 ft. from N and W of N 25½ acres of 77-ac. tract, Wm. Birdwell Sur., 4 mi. SW Talco. T.D. 4,361 ft.; P.B. 4,343 ft.; top sd. 4,287 ft.

J. B. Bond et al No. 2 Sanders, W. F. Dyer Sur. Top Georgetown 3,424 ft.; drlg. 4,136 ft.

J. DeGrazer et al No. 1 F. N. Bates, F. M. Bates Sur. Drk.

Straube & Straube No. 1 B. Norman, 330 ft. N and E of E½ of 255.53-ac. tract, M.E.P.&P. Sur. Loc.

Freestone County

Tom Sharp et al No. 1 E. E. Lamb, Jas. Sparks Sur., 3 mi. SE of Streetman. Austin chalk 2,582-3,024 ft.; cg. 3,231 ft.

Grayson County

Olson Drlg. Co. No. 1 Southwestern Life Ins. Co., J. C. Jamison Sur., 6 miles NW of Denison. Elev. 767 ft. Top Viola 4,-901 ft.; T.D. 5,890 ft.; fsg. 5,400 ft.

Henderson County

McDougal et al No. 1 E. Price, M. Mathews Sur., 4 mi. S of Trinidad. Rig.

Hopkins County

D. Hager et al No. 1 J. Worshorn, A. Whitmore Sur. Pecan Gap 1,187-1,208 ft.; top Woodbine 3,040 ft.; top Georgetown 3,600 ft.; drlg. 3,956 ft.

Kaufman County

Lester & Duffield No. 1 D. C. Baron, J. T. Taylor Sur., 8 mi. NE of Elmo. Top Austin 2,223 ft.; T.D. 3,720 ft.; P.B. to 2,900 ft.

Lamar County

Abercrombie & Harrison No. 1 C. M. Terrell, 200 ft. out of NW cor. of 220-ac. tr., 4½ mi. SE of Paris. Material.

Limestone County

E. H. Daugherty No. 1 S. Welch A, Run lnr. 3,158 ft.

C. L. Lytle No. 1 J. L. Thompson, P Varella Sur., Mexia field. T.D. 6,054 ft.; P.B. 5,880 ft.; S.D.

Red River County

Abercrombie-Harrison No. 1 Temple Lbr. Co., D. D. Bruton Sur., 10 mi. NE of Clarksville. Top sd. 2,104 ft.; top Paluxy 1,057-59 ft.; fsg. 2,294 ft.

Williams et al No. 1 L. and O. Roberts, James Bankston Sur., 3 miles NE of Annona. Elev. 396 ft.; S.D. 725 ft.

Rusk County

D'Arman et al No. 1 R. E. Talliferro, T. L. Wilkshire, 5 mi. W of Henderson. Drlg. 3,606 ft.

McCallum et al No. 1 E. C. Gary, John Piburn Sur., 5 mi. S of Henderson. Elev. 336 ft.; S.D. 3,440 ft.

Pure Oil Co. No. 1 W. H. Faulkner, Wm. Elliott Sur., S of Concord. Elev. 563 ft. drlg. 7,351 ft.

Titus County

Jule Alford No. 2 Fry, I. P. Stern Sur., 1,-313 ft. N of No. 1. Top Georgetown 3,-610 ft.; S.D. 4,194 ft.

Dean & Atkisson No. 1 A. Cornelius, Delgado Sur. Top Georgetown 3,490 ft.; drlg. 3,800 ft.

Hollingsworth Drlg. Co. No. 1 A. O. Brown, cen. Lot 1, Blk. 41, Delgado Sur. Top Paluxy 4,170 ft.; S.D. 4,347 ft.

Jones & Shelburne No. 1 Hazelwood, Stern Sur. Top Paluxy 4,294 ft.; S.D. 4,351 ft.

Magnolia Pet. Co. No. 1 L. Blackburn, Benj. Jones Sur., 2½ mi. E of Talco. Rig.

Nivia Oil Co. No. 1 J. N. Kelley, J. Hel-man Sur. T.D. 4,300 ft.; comp.

A. M. Peairs No. 1 L. Sanders, C of Lot 1, Blk. 30, Talco Townsite. Top sd. 4,188 ft.; S.D. 4,242 ft.

Stroube & Stroube No. 1 S. E. Strutton, 370 ft. N and C of E. and W lines of 50-ac. tract, M.E.P.&P. Sur., 6 mi. E of Talco. Rig.

Tide Water Oil Co. No. 1 Carr, M. V. Del-gado Sur. Elev. 358 ft. Drlg. 4,345 ft.

EAST TEXAS

(Border Counties)

Bowie County

Fay T. Chew et al No. 1 Barkman, John Parkman Sur. Sur. pipe set; W.O.C.S.

Ferguson & Hill No. 1 A. Y. Breckenridge, N. Dycas Sur. 10-in. set 60 ft.; W.O.C.S.

Westmount Oil Co. No. 1 Phillips, J. W. Hancock Sur. Drlg. 3,687 ft.

Westmount Oil Co. No. 1 R. N. Phillips, G. N. Hancock Sur., 10 mi. N of Oak Grove. Base Georgetown 1,924 ft.; top Paluxy 1,924 ft.

Cass County

American Liberty Oil Co. No. 4 Maxie, John Collum Sur. Comp.; flw. 40 B.P. H.; ½-in. tbg. ck.; T.D. 6,006 ft.; 5-in. 5,972 ft.

W. F. Lacy et al No. 1 Baugus, J. H. Rives Sur. 16-in. 258 ft.; drlg. 4,596 ft.

Marathon Oil Co. No. 1 R. P. Willis, S.F. I.W. Sur. Drlg. 5,379 ft.

R. W. Norton No. 1 W. M. Hall, 330 ft. S and 697 ft. W. NE cor. 100 acs., W. Robinson Sur. No. 907. Drlg. 4,646 ft.

R. W. Norton No. 1 A. S. Hall, 334 ft. S and 2,091 ft. E. NW cor. 160 acs., James Young Sur. T.D. 6,075 ft.; will set csg.

R. W. Norton No. 3 Haywood, on Priscilla Evans Sur. Drlg. 4,048 ft.

R. W. Norton No. 2 Mary Rives, John Collom Sur. Cg. 6,003 ft.

Showers & Moncrief Co. No. 1 Stallcup, J. Davenport Sur. Drlg. 4,984 ft.

Superior Oil Co. No. 1 Stallcup, 330 ft. N of S line and middle E and W of 20 ac., Robert Trammel Sur. Drlg. 5,749 ft.

United Gas Pub. Ser. Co. No. 1 L. J. Cun-ningham, W. Robinson Sur. T.D. 6,100 ft.; rng. 7-in.

United Prod. Corp. No. 2 E. J. Cunningham, on Wilson Robinson Sur. Drlg. 4,094 ft.

United Prod. Corp. No. 2 E. Tyson Unit, J. H. Rives Sur. Drlg. 3,756 ft.

United Gas Pub. Ser. Co. No. 2 F. S. Simpson, 2,091 ft. E and 334 ft. N, SW cor. of 160 ac., James Young Sur. Drlg. 5,542 ft.

United No. 1-A E. Tyson Unit, J. H. Rives Sur. 13-in. 315 ft.; drlg. 5,836 ft.

Harrison County

W. F. Bridewell et al No. 1 Clapp, F. C. Baker Sur. T.D. 2,412 ft.; acid 2,000 gals.; swbd. S.W. only; S.D.O.; may D.D.

Panola County

Logansport P. L. Corp. No. 1 Rushing, M. Smith Sur. Cg. sdy. l. 2,582-2,600 ft.; show oil.

NORTH TEXAS WILDCATS

Archer County

Consolidated Oil Co. No. 1 Portwood "DD," T.E.&L. 2,412. Cem. 6⅝-in. csg. 1,428 ft.; W.O.C.

Continental Oil Co. No. 1 Claud Cowan, Blk. 6, J.C.S.L. Drlg. 1,067 ft.

Kemp & Waggoner No. 1 Wilson, Blk. 75, A.T.N.C.L. Cem. 6⅝-in csg. 2,190 ft.; sd. 2,205-20 ft.; testing.

J. T. Miller No. 1 Rogers, T.E.&L. 2,407. Drlg. 1,220 ft.

Clay County

Golding & Cochran No. 1 Ben Nutter, Blk. 30, G.C.S.L. Drlg. 1,800 ft.

Cooke County

Jas. L. Anderson No. 1 Bruhlmeyer, H. Strong A-930. 1,700 ft. fluid 5 hrs., testing; est. 5 bbls. per hour.

Anderson & Kerr No. 1 A. Wilson, Strong Sur. A-930. S.D.O. 2,390 ft.

Anderson & Kerr No. 1 Will McKemie, A. C. C. Bailey A-44. R.U.R.

J. G. Beard et al No. 1 R. S. Rose, T. E. Hardeway A-464. Swabbed 500 bbls. 8 hrs.; P.O.P.; pay 1,937-43 ft.

Fain-McGaha No. 1 J. W. Mount, sec. 9, S.P.R.R. Drlg. 1,737 ft.

Hardin Oil Co. No. 1 J. G. Bonner, J. Lindheimer Sur. S.D.O. 2,308 ft.

B. H. Hilburn No. 1 Hugan, A. Myers Sur. No. A-640. Drlg. 1,610 ft.

Homarado Oil Co. No. 1 H. D. Field, J. B. McClyman A-735, 6⅝-in. 1,216 ft. W.O.C.

W. M. Johnson No. 1 G. M. Smith, J. Boyle A-88. Drlg. 275 ft.

Joseph Oil Co. No. 1 Wm. Bergman, John Barnett A-12. Spudding.

A. N. Landes No. 1 Mrs. O. Wilson, E. Reed A-849. Drlg. 140 ft.

Mills & Carey No. 1 Bezner, J. B. Trenary A-1,043. Spdg.

Mullins & Weil No. 1 Rose T. Hardeway A-464. Loc.

N. Newburn No. 1 Dotson, Wm. Campbell Sur. A-238. S.D.O. 1,710 ft.

E. R. Robison No. 1 J. Kreba, H. Wilkey Sur. A-1,090. Drlg. 1,150 ft.

J. C. Shaffer No. 1 Wilson, H. Strong A-930. Est. 300 bbls.; P.O.P.; pay 2,060-68 ft.

Wertheimer et al No. 1 W. A. Erwin, J. Armendaris A-1,234. Spudding.

Denton County

C. S. Head No. 1 Travelers Insurance Co., Wm. A. Thompson Sur. A-1,238. S.D. 1,860 ft.

Manning & Moore No. 1 E. L. Darnell, I. Walters Sur. A-1,329. S.D. 2,025 ft.

Foard County

Humble O. & R. Co. No. 1 Burnett, sec 16, Blk. X, S.P.R.R. Sur. Drlg. 3,495 ft

Jack County

J. W. Campbell No. 1 W. J. Cannon, E. P. Costen A-1,325. Drlg. 750 ft.

S. B. Edwards No. 1 Bryson, J. Hughson Sur. A-256. U.R. pipe 560 ft.

W. H. Hammon No. 1 G. E. Evett, H. Plaster Sur. S.D. 750 ft.

W. H. Hammon No. 1 Kuykendall, B.S.&F. A-1,720 ft. Drlg. 1,100 ft.

C. Kadane No. 1 E. F. Smith, S.P.R.R. Sur. A-522. S.D.O. 1,715 ft.

States Oil Corp. No. 1 J. Lowe, J. Highson A-256. Drlg. 240 ft.

Sterneax Oil Co. No. 1 Boyd, J. N. Wright Sur. A-898. T.D. 3,370 ft.; swabbing water and trace oil.

Montague County

Benton & Holmes No. 1 Hilderbrand, B.B. Lee A-614. Loc.

Bowden et al No. 1 Buck Est., D. F. Mallard A-925. S.D. 200 ft.

Grisso Royalty Co. No. 1 Jordon, T. R. Jackson A-394. Drlg. 2,930 ft.

Jim Seeds et al No. 1 Coombs, sec. 55, M.E.P.&P. Sur. Drlg. 2,197 ft.

Sinclair Prairie Oil Co. No. 1 Holt Est., Blk. 45, K.C.S.L. Mov. in matl.

R. Franklin Smith No. 1 Cora Hurd, E. Ballinger Sur. Drlg. 1,180 ft.

Southwest Pet. Co. No. 1 W. S. Petty, S. A. Southerlin Sur. A-992. Spud. and S.D.

Wichita County

Clark et al No. 1 C. T. Marshall, J. Cole A-838. Loc.

Pete Harmon et al No. 1 J. B. Jamison, J. Deck Sur. A-52. Drlg. 1,520 ft.

J. M. Morton No. 1 Housler, J. C. Pike, A-509. Drlg. 375 ft.

Reno Oil Co. No. 1 W. T. Waggoner-D, sec. 1, S.&M. Sur. A-393. Fsg. 1,576 ft.

J. M. Seaberry No. 1 Guggenheim, sec. 15. Cherokee Co. Sch. Lds. Drlg. 485 ft.

Wilbarger County

Franklin Oil Co. No. 1 D. G. Feller, et al, sec. 108, Blk. 14, H.&T.C. Sur. S.D. 1,-570 ft.

Smith No. 1 S. A. Dill et al, sec. 32, Blk. 14, H.&T.C. Sur. Drlg. 2,150 ft.

Webb & Rogers No. 1 Mrs. D. Coffee, sec. 44, H.&T.C., Blk. 15. Spudded.

Young County

Associated Developers No. 1 Terrell, T.E. &L. 285. Drlg. 2,650 ft.

Art Cox No. 1 J. T. Rogers, J. Ray D-1,628. Drk.

W. D. Eastland No. 1 A. R. Manning, T.E. &L. 3,412. R.U.C.T

Hinson Tidwell No. 1 Thompson. T.D. 3,500 ft.; running 6⅝-in. pipe.

D. M. Knox No. 5 Burkett, T.E.&L. 3,-412. Drlg. 900 ft.

C. D. Neff et al No. 1 W. A. Dennis, C. F. Bass Sur. T.D. 3,693 ft.; C.O.

Pitzer West et al No. 1 W. R. Dollins, T.E. &L. Sur. 615. Drlg. 800 ft.

Rathke Oil Co. No. 1 O. W. Hill, J. C. Graham A-122. R.U.R.

Rathke Oil Co. No. 2 J. T. Rogers, S. H. Graham Sur. A-124. Cem. 6⅝-in. 3,587 ft.; G.L. 3,585-97 ft.; showing gas and oil.

Texas Co. No. 1 Stephens, T.E.&L. 1,985. S.S.O. 4,057-83 ft.; testing.

Yorktex Pet. Co. No. 1 F. G. Burnett, G W. Hills A-151. Spudding.

TEX. PANHANDLE WILDCATS

Gray County

Bell O. & G. Co. No. 2 Furneaux, sec. 102, Blk. B-2, H.&G.N. Sur. Drk.

K. Kinsey No. 1 Stephens, sec. 137, Blk. sec. 546, Blk. H, B-2, H.&G.N. Sur. T.D. 2,475 feet, fishing tools.

J. R. Phillips No. 1 W. H. Taylor, 280 ft. from N and 374 ft. from E lines of W½ of sec. 9, Blk. B-2, H.&G.N. Sur. Drlg. 60 ft.

Warner Oil Co. No. 1 Parker, 330 ft. from S and W lines of NW¼ of sec. 18, Blk. H. A. Wallace Sur. T.D. 2,345 ft.; R.U. S.T.

Hartley County

O. V. Beck et al No. 1-A Matador Ranch, sec. 20, Blk. 22, C.S.S. Sur. Pipe stuck 4,600 ft. and S.D.

Hutchinson County

Harry Stekail No. 1 Erle Thompson, sec. 5, Blk. M-18, D.P. Sur. Drlg. 2,080 ft.

Moore County

Moran Bros. No. 1 Lucky Tiger Oil Co., 330 ft. from S and E lines, SE¼ sec. 5, Blk. 1, T.D. Sur. Drlg. by 8¼-in. csg. at 2,744 ft.

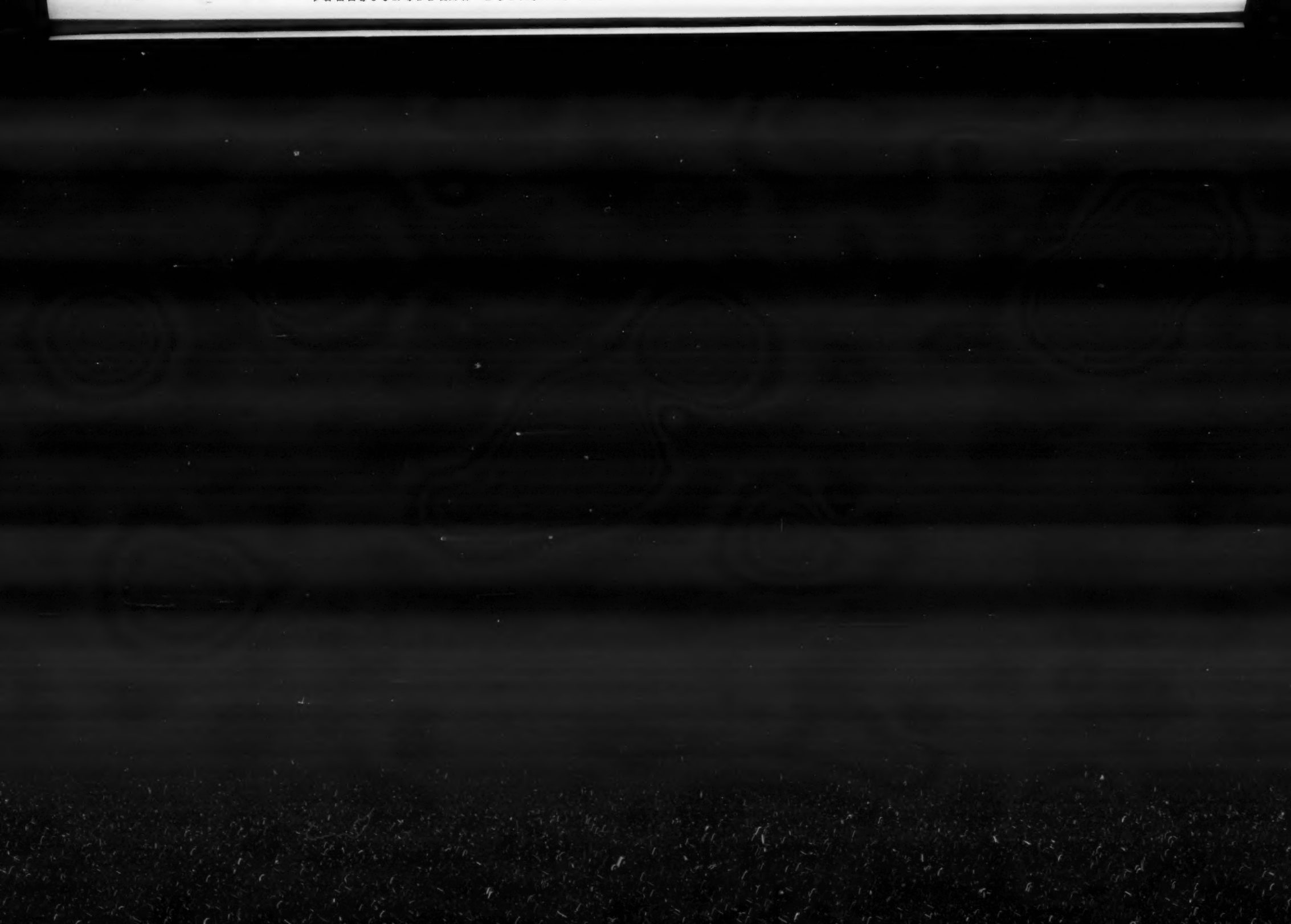
Shamrock O. & G. Co. No. 1 Brumley, 1,320 ft. from S and 660 ft. from E lines of W½ of sec. 398, Blk. 44, H.&T.C. Sur. Cellar.

Wheeler County

Allender & Heare No. 1 Harvey, sec. 67, Blk. 13, H.&G.N. Sur. S.D. 2,193 ft.; H.F.W.

Johnston et al No. 1 Rabo, sec. 105, Blk. 23, H.&G.N. Sur. Spudded and S.D.

Phillips Pet. Co. No. 1 Porter, sec. 35, Blk. A-8, H.&G.N. Sur. T.D. 3,735 ft.; Underreaming 8¼-in. csg.



East and East Central Texas

25 WELLS ACTIVE IN TALCO COVERING WIDE TERRITORY

By L. E. BREDBERG

DALLAS, Tex., June 29. — Two wells were completed in the Talco field, Titus-Franklin Counties in the past week and six are "about to complete," all having logged the Paluxy and saturated sand, and coring ahead, or have set casing preparatory to completing. There are 25 tests drilling in the field with 7 derricks up and 2 rigging up preparing to get under way this week, the Talco townsite contains the majority of the present drilling operations although locations are spreading out, one as far east as 6 miles from Talco.

One spectre has raised its head in the field as a possible menace to operations, that being a threatened shortage of water for drilling purposes. Water for drilling and producing operations is now obtained from nearby ponds, tanks and small streams in the area surrounding Talco but lack of rainfall is cutting down the supply. Well water, thereabouts has been found to be brackish. The city of Talco spent several thousand dollars to drill a well for a water supply for the city, but "sweet" water was not obtained. However, the Humble Oil & Refining Co. is planning on tapping a large lake several miles from the scene of operations and to drill water wells that distance from Talco, expecting to provide its own water supply, and build a system to furnish its own rigs and camp now under construction just southeast of Talco. Drinking water is being trucked in and sold at 5 cents per gallon, similar to the days when McCamey, in West Texas, was on the boom and water brought a higher price than did the oil.

Six more tests were getting under way in the field this week, with other locations to be reported within the next seven days. Humble Oil & Refining Co., which holds the greater amount of proven acreage in the field, staked two of the locations, the others having been staked by independent lease owners. Tide Water Oil Co. completed an east offset to the discovery well this week, making 43 bbls. per hour through 2½-inch tubing, and the School lot test just southeast of the townsite was completed by Sanders and Murchison for 325 bbls. flowing, in 24 hours. The former is located on the Carr lands in the Delgado Survey and the latter in the I. P. Stern Survey.

Outpost Test to Improve Producer

Earl Bateman No. 1 Phillips, in the William Birdwell Survey, 4 miles southwest of Talco, in Franklin County, outpost test southwest of production, drilled into salt water this week and was shut down at 3,361 feet to plug back. It was due to be cemented back about 18 feet and a test made from the sand, which was reported as 35 feet thick, topped at 4,287 feet. Those watching the coring of the test were positive that it would make a producer, and Bateman, himself, purchased a considerable amount of additional acreage in the vicinity of the outpost. The test has been running high on important markers, therefore was given the best of chances for making a producer, which would mark the most important extension yet recorded in the field and start many more operations. It will probably be tested this week. Bateman is a well-known drilling contractor and owner of production in the East Texas field.

Purchase

The Lucey Petroleum Corp., which with Byrd & Frost, Inc., and C. & G. Oil Co., all of Dallas, hold leases on several hundred acres in the field, has purchased the one-quarter interest in the wells and leases of the C. & G. Oil Co. and the Independent Crude Oil Trading Co.'s gathering system in the field. The deal includes a 15-car loading rack on the P. & M. P. Railway just southeast of Talco, from which crude is being shipped by tankcar. The gathering system has a franchise for gathering oil in Talco townsite from wells producing in the city, paying $5 to the city for each street crossed and $1.50 for each alley crossed by its lines. Such a monopoly is something new in gathering systems, obviating the laying of a web of different lines to connect to townsite wells.

The Humble Oil & Refining Co. has moved in a couple of heavy rotary rigs, departing from the customary 96-foot derrick and regular equipment now in use in the field. These heavier rigs can drill the holes faster, thereby taking care of the many offsets the company will be forced to drill on its leases offsetting townsite-lot drilling. The company holds acreage nearly surrounding the town.

The Humble Oil & Refining Co. has cleared large space for a camp just southeast of the Talco townsite, and has two bunk houses already erected. It has moved in much drilling equipment and pipe to its new material yard, adjacent to which the company has a five-car loading rack on a siding built into its camp site. L. O. Holloway, superintendent for the company, is being transferred from Gladewater, in the East Texas field, to be in charge of the company's operations at Talco, and J. L. Van Pelt, superintendent for the crude oil department of the company is being transferred from London in the East Texas field to Talco. The company is preparing to lay a gravity oil gathering system in the Talco field, which will be under supervision of Van Pelt.

The Community Public Service Co. is putting in a high line to furnish electric power to the new field and many rigs may possibly be operated by electric power if adequate drilling water is not forthcoming. Water from the Sulphur River, to the north of the field, is not suitable for boilers or drilling purposes, and has to be treated before used. One water company now supplies water to drilling rigs in the Talco area, but others besides the Humble Oil & Refining Co., are preparing to organize and develop water systems in the field.

Wildcatting

The outpost test of Wood and others on the J. E. Huggins farm in the Levi Jordan Survey, 2 miles southwest of the small Rusk pool in Cherokee County, is showing favorable signs and may make a small producer if water can be shut off, thereby extending this three-well pool.

It was tested in the Woodbine sand, pay horizon in the pool, from 5,140-86 feet, flowing oil and water, and casing has been set and cemented at 5,180 feet in an effort to case off the water before making another test. Dry holes have been drilled to the south and southeast, but the pool may see several hundred more acres proven to production in the opposite direction. The pool is about 6 miles southwest of Rusk and is nearly three years old, precipitating an exceptionally "hot" lease and royalty play in the area and throughout the county when the discovery was made by T. J. Wood, John Wolfe and others.

Hopkins Test

The closest watched test in the district is Dilworth Hager, Luse, Russ and others on the Worsham, in the O. Wetmore Survey, about 18 miles southwest of Talco in Hopkins County. It topped Georgetown lime at 3,623 feet and is now down to 4,322 feet preparing to core ahead. Elevation is 440 feet.

Another wildcat that will attract attention and hold it to the fault line extending east and west from the Talco field, will be that of the Texola Land Corp. which has a permit to drill on lands owned by the General American Life Insurance Co. in Block 104, J. Yeary Survey, Hunt County.

Abercrombie and Harrison, firm believers in Red River County, are now moving in material for a test on the C. M. Terrel farm, located in the Abner Hill Survey, 4½ miles southeast of Paris in Lamar County. Their No. 3 Southern Pine Lumber Co. test in the D. D. Bruton Survey, near Clarksville, in Red River County, is now shut down at 2,292 feet after losing some drill pipe in the hole. This test attracted attention a couple of weeks ago when it logged good oil showings, which failed to prove of commercial value when tested, and drilling was carried to the present depth, where the hole may be abandoned if the pipe cannot be fished out.

Pure Oil Co.'s Trinity sand test east of Mount Enterprise in southern Rusk County, important deep test in the district, is down 7,325 feet and preparing to take a core. It is in the basal Trinity, with no showings of oil or gas. This has been one of the most important tests in the district.

EAST TEXAS COMPLETIONS

Gregg County

Arkansas Fuel Oil Co. No. 36 Burnsides, 3,486-3,580 feet, plugged back to 3,574 feet, 26 bbls. in 15 minutes. Gulf Oil Corp. No. 44 Shepherd, 3,479-3,504 feet, 74 bbls. per hour. Humble Oil & Refining Co. No. 26 Harris, 3,472-3,532 feet, 68 bbls. per hour. L. G. & S. Oil Co. No. 14 McQueen, 3,570-3,603 feet, 24 bbls. on pump. Magnolia Petroleum Co. No. 8 Jones, 3,610-3,620 feet, 90 bbls. per hour. Stanolind Oil & Gas Co. No. 9 Harmon, 3,494-3,530 feet, 20 bbls. in 28 minutes; No. 17 Hopkins, 3,473-3,545 feet, 14 bbls. in 15 minutes; No. 41-B McKinley, 3,548-3,596 feet, 16 bbls. in 15 minutes; No. 18-C Flewellen, 3,590-3,617 feet, 16 bbls. in 15 minutes. Tide Water Oil Co. No. 22 Castleberry, 3,574-3,597 feet, 8 bbls. in 10 minutes; No. 14 Tuttle, 3,530-3,548 feet, 30 bbls. in 30 minutes.

Adams & Lyle No. 3 Williams, 3,590-3,591 feet, 24 bbls. in 30 minutes. Dyck Oil Co. No. 7 Blackman, 3,680-3,681 feet, 28 bbls. per hour. Empire Gas & Fuel Co. No. 11 Lockhart, 3,510-3,525 feet, 30 bbls. in 30 minutes. Gulf Oil Corp. No. 31 Alexander, 3,526-3,550 feet, 62 bbls. per hour. Magnolia Petroleum Co. No. 11 Carr, 3,450-3,469 feet, 100 bbls. per hour. Sinclair Prairie Oil Co. No. 57-A King, 3,495-3,547 feet, 30 bbls. in 20 minutes. Texola and United E. & W. Oil Co. No. 3 Choice, 3,702-3,703 feet, 15 bbls. in 30 minutes. Sun Oil Co. No. 14 Pentecost, 3,592-3,630 feet, 77 bbls. per hour. Winston Oil Co. No. 10 Jones, 3,596-3,697 feet, 75 bbls. in 75 minutes. Wetco Oil & Gas Co. No. 6 Blackman, 3,659-3,660 feet, 40 bbls. per hour.

Rusk County

Beren and others No. 6 Kennedy, 3,658-3,672 feet, 40 bbls. per hour. Bowles No. 15 Wells, 3,606-3,608 feet, 35 bbls. per hour. Champlin and Bass No. 4 Alford, 3,732-3,755 feet, 25 bbls. in 30 minutes. Cook Drilling Co. No. 4 Cox, 3,646-3,671 feet, 30 bbls. in 40 minutes. Cope No. 1 Ector, 3,492-3,511 feet, 20 bbls. in six hours on pump. Elsep Oil Co. No. 1-C Pinkston, 3,574-3,625 feet, 10 bbls. per hour on pump. Gulf Oil Corp. No. 11-C Mayfield, 3,660-3,668 feet, 40 bbls. per hour through three-quarters inch choke.

Humble Oil & Refining Co. No. 47-A Blackwell, 3,656-70 feet, 76 bbls. per

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West and North Texas

By L. E. BREDBERG

NEW ECTOR POOL IMPROVED BY DRILLING DEEPER IN LIME

FORT WORTH, Tex., June 29.—The Gaines County test of Landreth Production Co., on the Kirk ranch, section 22, Block A-21, P.S.L. Survey, has shown for an estimated 50- to 75-bbl. per day producer on swabbing tests made to the bottom of the hole, 4,280 feet. Acid was resorted to in an effort to increase production. It will be a couple of days before a test can be made. If it does not prove a much better well than now showing, it will be carried deeper. Bottom-hole contracts call for a 5,000-foot hole by July 1.

Opinions of different geologists are that it has not yet reached the horizon from which Walsh & Adams No. 1 Averitt, to the northwest, showed 12,368,000 feet of wet gas at 4,910 feet, consequently a better pay streak may be picked up in the Kirk test, if and when drilled deeper. However, the operators are now anxious to make a commercial producer of it before expiration of the bottom-hole money contracts on July 1, and the acid-result hopes are running high.

Gravity of the oil already produced by swabbing is only 24 degrees (corrected), which is low for Permian Basin oil, especially for the deeper oil. The hole is making around 1,000,000 feet of gas, the gas increasing as swabbing was continued.

Wildcat Discovery Aided

W. H. Dunning No. 1 Cummins, located in section 33, Block 45, Township 1n, T.&P. Survey, about 4½ miles northwest of the Goldsmith field in western Ector County, recently completed for a new discovery well at 4,252 feet, flowing at the rate of around 20 bbls. per hour, was deepened 15 feet this week and started flowing better than 30 bbls. per hour. The Gulf Pipe Line Co. has tied into the well with a 4-inch line from its Goldsmith field. Dunning is now drilling a north offset to his discovery and has plans laid for drilling a series of tests on his leases surrounding the discovery.

Celebration of Discovery

A. J. Frazier and E. A. Ungren today celebrated the year-old discovery of the Hawley field in Jones County, one of the most prolific and best paying fields in the West Texas district because of its five producing pay zones and the high-gravity oil produced. There are at present 37 producers in the pool with a daily allowable of 2,555 bbls. Production is found from 1,900 to 2,150 feet.

The N. H. Martin & Sons discovery well on the Spurrier lands in eastern Jones County was put on the pump this week and made 61 bbls. in 12 hours, rapidly decreasing to around 1 bbl. per hour. It was shut down. The pay sand may be shot in an effort to raise the production. Location is 3 miles north of Nugent, and about 5 miles southwest of the Lueders pool. The pay formation is the Hope sand, drilled from 1,921-28 feet. It is in the William Walker Survey No. 1.

Spacing in Henderson

At a meeting held by the Texas Railroad Commission on June 24, the Atlantic Oil Producing Co. asked that the new prolific Henderson area in northern Winkler County be put on a 20-acre spacing regulation basis, which would call for wells being 330 feet from the lease lines, or 660 feet apart from north and south and 1,320 feet apart from east and west. This irregular spacing is called for because of the subdivision conditions existing in the 1-mile wide area. If the advocated casing program is accepted by the commission, the heavy gas encountered at 2,600 feet will be sealed off. A proration basis of fixed allowables to the 20-acre units was also asked by the company. The plan was taken under advisement.

Shell Petroleum Corp. No. 1 R. A. Leck, located in the SE quarter of section 32, Block 74, P.S.L. Survey, 1½ miles northwest of the prolific wells on the Henderson ranch, north of the Hendricks field in Winkler County, is running low on structure and appears as a dry hole at this writing because of its drilling below 3,125 feet. It apparently defines the producing area to the northwest.

Wildcat

Fields, Cherry & Finley have staked location for an important and interesting test near the New Mexico line in northern Winkler County. Same is in the SW quarter of section 3, Block C-23, P.S.L. Survey, 2 miles north of the Leck pool. Location is on Walton lands.

Rig Builders' Strike

Rig builders in southeastern New Mexico and West Texas have been on a strike for over a week now, which has slowed up operations somewhat in both districts, especially the starting of new tests. The builders are asking an increase in daily wages to $14 per day, and $16 for crew foreman. They are also insisting that only one apprentice rig builder be employed by contractors on each job. Increased living costs are given as the reason for the necessity of increases in wages.

Ranger and Wichita Falls

K. R. March of Fort Worth is moving in and rigging up a wildcat on a 1,520-acre block in Stephens County, on the R. Q. Lee lands, in section 51, Block 5, T.&P. Survey, near Cisco. The test will be drilled to the Strawn sand and the Caddo lime. The West Virginia Drilling Co. of Eastland has the contract.

Ungren and Frazier of Abilene, and others, have staked location 12 miles southwest of Albany in Shackelford County for an 1,800-foot wildcat, No. 1 W. H. Green, in section 68, Block 12, T.&P. Survey, on a 600-acre block.

Lane & Simmons have given up their deep test for production 6 miles northeast of Vernon in Wilbarger County, at 3,510 feet. It showed neither oil or gas. Location is in section 43, Block 12, H.&T.C. Survey.

Panhandle District

There were seven locations staked in the Panhandle district this week and an even dozen wells were completed, two of which were gassers. Daily average production for the field ran around 65,255 bbls., a slight increase over the previous week.

WEST TEXAS COMPLETIONS

Andrews County

Fuhrman Petroleum Corp. No. 3 Ford, 4,383-4,478 feet, acidized, 250 bbls.

Crane County

Gulf Oil Corp. No. 135 McElroy, 2,765-2,929 feet, shot, 738 bbls.

Ector County

Eppenauer Drilling Co. No. 1-B Kloh, 4,096-4,265 feet, plugged back to 4,258 feet, shot, 165 bbls.

Fisher County

Tide Water Oil Co. and others No. 3 Howard, 3,647-3,701 feet, acidized 1,000 gallons and 2,000 gallons, shot, 270 bbls.

Howard County

Continental Oil Co. No. 2-G Clay, 2,391-2,515 feet, shot, 306 bbls. Ennisbrook Oil Co. No. 8 Rhotan, 2,480-2,755 feet, shot, 925 bbls. Murray No. 3 Davis, 2,502-2,803 feet, acidized and shot, 998 bbls.

Jones County

Humphrey No. 15 Dorsey, 2,219-24 feet, 425 bbls. Ungren & Frazier No. 6 Dorsey, 2,202-08 feet, 76 bbls. Martin No. 3-C Dorsey, 2,210-16 feet, 669 bbls. in seven hours. Lesh & McCall No. 2 Jennings, total depth 1,951 feet, acidized, 189 bbls. Roeser & Pendleton No. 2-B Higgs, dry and abandoned 1,925 feet.

Pecos County

Marathon Oil Co. No. 14-H Yates, 1,467-1,773 feet, 2,022 bbls. a day. Crump & Watson No. 3 Iowa Realty Trust, 1,545-1,660 feet, shot, 14 bbls. Messenger No. 1 Iowa Realty Trust, dry and abandoned 1,400 feet, elevation 2,518 feet. Cardinal Oil Co. No. 9-A Smith, 348-58 feet, 176 bbls.

Ward County

Texas Pacific Coal & Oil Co. No. 7 Barker, 2,280-2,400 feet, shot, 757 bbls.; No. 15 James, 2,370-2,535 feet, shot, 736 bbls. California Co. No. 26 Gordon, 2,390-2,533 feet, shot, 399 bbls.; No. 30 Gordon, 2,328-2,522 feet, shot, 3,025 bbls. Mid-Continent Petroleum Corp. No. 2 Potts, 2,240-2,395 feet, shot, 295 bbls. Richardson Oils, Inc., No. 1-A University, 2,550-2,768 feet, shot, 860 bbls. Gulf Oil Corp. No. 70 O'Brien, 2,526-2,764 feet, shot, 480 bbls. Caprito and Atlantic No. 1 Miller, dry and abandoned 2,600 feet, elevation 2,506 feet.

Upton County

Brewer & Smith No. 1 Cordova Union, 2,007-72 feet, acidized, 374 bbls. Texas Pacific Coal & Oil Co. No. 12-C Lane, 2,319-91 feet, acidized, 159 bbls.

Winkler County

Sinclair Prairie Oil Co. No. 2-B Walton, 2,850-2,993 feet, shot, 1,047 bbls.; No. 3-B Walton, 2,890-2,997 feet, shot, 1,478 bbls. Tide Water Oil Co. No. 4 Walton, 2,790-2,868 feet, shot, 1,277 bbls. Humble Oil & Refining Co. No. 1 McCutcheon, 2,808-2,980 feet, shot, 422 bbls.; No. 2-C Walton, 3,010-3,080 feet, 2,032 bbls. Mid-Continent Petroleum Corp. No. 2 Walton, 2,776-2,980 feet, shot, 986 bbls. Magnolia Petroleum Co. No. 23 Walton, 2,810-2,950 feet, shot, 2,453 bbls.; No. 24 Walton, 2,845-2,912 feet, shot, 317 bbls. Sayre Oil Co. No. 2-C Howe, 2,875-2,990 feet, 703 bbls. Richardson Oils, Inc., No. 3-B Scarbrough, 2,848-3,000 feet, shot, 1,012 bbls. Wahlenmaier and Atlantic Oil Producing Co. No. 2-C Leck, plugged at 2,830 feet, estimated 60,000,000 feet of gas.

Rocky Mountain Runs

Estimated daily average runs for the week ending June 27 follows:

WYOMING

Salt Creek	16,600
Big Muddy	1,530
Badger Basin	40
Byron	10
Dallas Derby	570
Dutton Creek	60
Elk Basin	380
Ferris	20
Frannie	1,800
Garland	90
Grass Creek	1,560
Hamilton Dome	1,260
Hidden Dome	90
Hudson	280
LaBarge	1,190
Lance Creek	4,050
Lost Soldier	930
Midway	60
Oregon Basin	1,750
Osage	800
Pilot Butte	30
Quealy Dome	120
Rock River	1,580
Polson Spider	160
Teapot	20
Warm Springs	50
Total Wyoming	35,030

MONTANA

Buckley Border	220
Cat Creek	750
Cut Bank	9,000
Dry Creek	1,420
Kevin Sunburst	4,500
Lake Basin	40

Pondera	1,100
Total Montana	17,030

COLORADO

Florence	200
Fort Collins and Wellington	340
Iles Dome	3,380
Moffat	450
Orchard	70
Rangely	70
Tow Creek	180
Total Colorado	5,190

NEW MEXICO

Artesia	640
Cooper Area	8,630
Eunice Area	20,860
Hobbs	23,550
Hogback	200
Jal	3,200
Lea Area	1,020
Maljamar	2,530
Monument	10,050
Rattlesnake	700
Table Mesa	70
Total New Mexico	71,450
Total Rocky Mountain	128,700

East Texas Fields

(Continued from Page 81)

hour. Jackson and others No. 6 Stewart, 3,742-3,745 feet, 30 bbls. in 30 minutes. Marathon Oil Co. No. 21 Clay heirs, 3,550-3,648 feet, 20 bbls. per day. Perot Oil Co. No. 1-B Sellebark, 3,500-3,590 feet, 50 bbls. in two hours on swab. Petroleum Marketing Co. No. 2-D Graham, 3,695-3,696 feet, 22 bbls. in 30 minutes. Stroube and Stroube No. 3 Russell, 3,756-3,795 feet, 30 bbls. in 45 minutes. Sun Oil Co. No. 29 Knight, 3,619-3,624 feet, 20 bbls. in 40 minutes. Texas Canadian Oil Co. No. 1 Brown, 3,657-3,690 feet, dry and abandoned. Wemack Oil Co. No. 8 Arnold, 3,682-3,685 feet, 20 bbls. per hour on pump.

Smith County

Centex Oil Co. No. 3-C Pace, 3,818-3,819 feet, 10 bbls. per hour. Hanbury No. 5 Sharp, 3,717-3,718 feet, 40 bbls. in 30 minutes. McMurray No. 13 Roberson, 3,797-3,798 feet, 10 bbls. in 15 minutes. Magnolia Petroleum Co. No. 10 Tyiska, 3,843-3,844 feet, 10 bbls. in 10 minutes. Medlin No. 7 Mayfield, 3,782-3,783 feet, 50 bbls. per hour. Pitzer and West No. 3 Sartain, 3,781-3,782 feet, 20 bbls. in 40 minutes. Sinclair Prairie Oil Co. No. 68-A Mayfield, 3,782-3,784 feet, 20 bbls. in 30 minutes. Texas Canadian Oil Co. No. 6 Pace, 3,814-3,815 feet, 70 bbls. per hour.

Upshur County

Red Iron Drilling Co. No. 2 Victory, 3,687-3,688 feet, 30 bbls. per day. Johnston No. 3 Williams, 3,706-3,708 feet, 20 bbls. in 30 minutes. Papadakis No. 1 Baird, junked and abandoned 3,650 feet. Rutledge and Boller No. 11 Todd, 3,704-3,705 feet, 25 bbls. per hour. Tide Water Oil Co. No. 21 Flewellen, 3,713-3,720 feet, 10 bbls. in 10 minutes.

Promising Wildcats

Shallow production in the Clarita area of Coal County, southeast of the Jesse pool in Pontotoc County, Oklahoma, was uncovered Monday at Continental Oil Co. No. 1 King, NW SW NE section 26-1-8. Sand was topped at 790 feet, with cores showing good saturation. At 824 feet, total depth, oil rose more than 400 feet in the hole, with production estimated at 50 bbls. daily. Fire, thought to have been ignited by a spark from striking steel, destroyed the derrick and damaged equipment. Operators planned to deepen this hole and use a spudder to drill a twin well to the shallow sand.

A slight show of oil with gas in Wilcox sand was reported in the B. O. Wigton and others No. 2 Koch, NW SE NE section 15-11-15e, wildcat near Pierce in McIntosh County. Top of Wilcox sand was 3,246 feet; total depth, 3,252 feet. Gas was estimated at 500,000 to 1,000,000 feet, with a stain of oil. Operators were to set 6-inch casing in the sand and drill in. This was said to be the first showing of oil in Wilcox sand in McIntosh County. The No. 1 Koch was completed as a gasser at 1,030-55 feet.

R. L. Kemp and Continental Oil Co. No. 1 Lohaus, NW SW NW section 21-17-5, wildcat in northern Lincoln County, southeast of Cushing, had Wilcox sand at 4,007-15 feet, total depth, and began spraying oil with gas estimated at 3,000,000 to 4,000,000 feet. It was shut in for tankage. Location is on a seismograph high that is favorably regarded by oil men. If a producer, it will open a new pool in the Cushing area.

In the Moore area of Cleveland County, taking of potential at Sinclair Prairie Oil Co. and others No. 1 Rice, NE cor. section 28-10-2w, was delayed until July 2. It was bottomed at 7,312 feet in Wilcox sand, and estimates of production ranged 35,000 to 50,000 bbls. a day, which, if borne out on potential test, will make it the biggest Oklahoma producer of 1936 to date.

Analyses of Oils

OTTAWA, Canada, June 29.—The federal Department of Mines has issued a report on analyses of Canadian crude oils, naphthas, shale oil and bitumen by P. V. Rosewarne, H. McD. Chantler and A. A. Swinnerton. The report embodies information accumulated by the department over a considerable period from the various producing fields in Canada. The report notes that Canada's present annual production of crude and naphtha, approximating 1,500,000 bbls., represents only about 3 per cent of the annual consumption.

In classification of crudes, the terms employed are paraffin base, asphaltic or naphthalene base, intermediate and hybrid. Most crudes can be easily assigned to one or other of the four classes; but some lack the light or the heavy end of a normal crude.

WEST TEXAS WILDCATS

Brewster County

F. C. Dodson No. 1 Texas American Synd. sec. 66, Blk. 10, G.H.&S.A. Sur. U.R. csg.; T.D. 2,223 ft.

Cochran County

Cascade and Honolulu Oil Corp. No. 1 E. B. Duggan, cen. Labour 13, League 55, Oldham County Sch. Land. T.D. 232 ft.

Concho County

J. W. Westbrook No. 1 Ledbetter. Drlg. 2,650 ft.

Crane County

Gulf Oil Corp. No. 2 W. N. Waddell, sec. 18, Blk. B-21. Coring 3,866 ft.
Gulf Oil Corp. No. 3 Tubbs, sec. 12, Blk. 27-B. Drlg. 3,878 ft.
Gulf Oil Corp. No. 2 McKnight, sec. 9, Blk. B-21. Loc.
Loffland Bros. No. 2 Tubbs, sec. 9, B-27. Drlg. 1,162 ft.
J. E. Lucas No. 1 Pershing, sec. 1, Blk. 31, H.&T.C. Sur. R.U. mch.
Moore Bros. No. 1 Barnsley, sec. 43, Blk. 32, P.S.L. Sur. S.D. 4,875 ft.; C.O.
Rider et al No. 1 Thaxton, sec. 2, W. L. Wilkenson Sur. Spudded and S.D.

Crockett County

John I. Moore No. 1 A. C. Hoover, sec. 4 Blk. FF, B.&B. Sur. S.D. 1,255 ft.

Ector County

Grisham-Hunter Corp. No. 1 R. B. Cowden, C of SE¼, sec. 10, Blk. 45, Twp. 2n, T.&P. Sur. P.B. and now drlg. 725 ft.

Fisher County

L. A. Daniels et al No. 1 J. J. Nickless. Fsg. 553 ft.
Ellis & Eubanks No. 1 C. C. Wourland, sec. 15, Blk. 21, T.&P. Sur. S.D 1,133 ft.
Forest Dev. Co. No. 1 A. M. Dry, sec. 108, Blk. 2, H.&T.C. Sur. T.D. 3,544 ft.; U.R. csg.

Gaines County

Humble O. & R. Co. No. 1 W. Eubanks, 660 ft. S and W, sec. 6, Blk. AX. S.D. 350 ft.
Landreth Prod. Co. No. 1 Kirk, sec. 33, A-21. T.D. 4,820 ft.; swabbing oil and water; acidized; testing.

Garza County

Brown Eagle Oil Co. No. 1 Sullivan, sec. 3, S. C. Harper Sur., Blk. H. S.D. 2,180 ft.
M. L. Richards No. 1 U. U. Post est., sec. 1,232, D. L. Phillips Sur. T.D. 875 ft.; set csg.

Glasscock County

F. Dodson et al No. 1 Carter heirs, 330 ft. from S and W, sec. 8, Blk. 33, Twp. 3s, T.&P. Sur. Spudded.

Hudspeth County

Hayman Krupp Oil & Land Co. No. 1 Thaxton, sec. 34, Blk 74, Twp. 6, T.&I Sur. T.D. 1,131 ft.; U.R. csg.

Jeff Davis County

C. M. Joiner No. 1 Jones & Coffield, sec. 8 Blk. 3, H.&T.C. Sur. S.D. 4,296 ft.

Jones County

Consolidated Oil Co. No. 1 Hamilton, sec. 21, Blk. 4, H.&T.C. Sur Drlg. 2,000 ft.
Owens-Snebold Oil Corp. No. 1 S. Gorman, 300 ft. from S and 200 ft. from W, sec. 5, Blk. 6, W. C. Walker Sur. R.U.
Parker No. 1 C. L. Brown, sec. 9, Blk. 2, T.&N.O. Sur. T.D. 2,132 ft.
W. K. Woods et al No. 1 McCright, sec. 14, O.A.L. Sur. S.D. 910 ft.

Kimble County

Wilcox O. & G. Co. No. 1 H. Spiller, sec. 15, Brooks & Burleson Sur., Abst. 80. Derrick.

Loving County

Evans No. 1 Johnson. Wtr. shut-off; T.D. 3,214 ft. Swabbed and S.D.

Pecos County

Dobbs Oil Co. No. 1 Rooney, sec. 12, Blk. 125, T.&St.L. Sur. Fsg. 2,060 ft.
E. R. Minshall, No. 1 Banker, sec. 25, Blk. 146, T.&St.L. Sur. Drlg. 671 ft.
S. Thompson No. 1 Elsinore Cattle Co., sec. 54, Blk. D, G.C.&S.F. Sur. Drlg. 1,463 ft.

Presidio County

Linderman Bros. Oil Corp. No. 1 J. B. Bledsoe & Badgley, sec. 16, Blk. 351, G.C.&S.F. R.R. Co. Sur., 2¼ mil. NE of Presidio. Drlg. 1,670 ft.

Schleicher County

Cardinal Oil Co. et al No. 1 J. A. Whitten, sec. 35, Blk. LL. T.C.R.R. Sur. S.W. 4,865 ft.; T.D. 4,867 ft.; set csg.
Mangus Oil Co. No. 1 Judkins & Spencer, C SW¼ sec. 4, W. W. Russell, grantee. Elev. 2,209 ft.; S.G. 4,350 ft.; gas sd. 4,956-58 ft.; T.D. 6,527 ft.; P.B. to 5,912 ft.; to acidize.

Taylor County

Geo. Callahan No. 1 S. J. Writer. T.D. 2,035 ft.; swedging csg.
A. R. Forrester No. 1 O. A. Prescher, sec. 14, Blk. 86, J. R. Shipman Sur. Drlg. 50 ft.

Terry County

J. A. Estes No. 1 F. B. Graham, sec. 23, Blk. T, O.&W.R.R. Machine.

Tom Green County

Spinner No. 1 Reed, Sub. 39, Mason & Perry Sur. Drlg. 2,282 ft.
E. E. Webb No. 1 D. B. Horn, sec. 137, Washington Co. R.R. Sur. Spudded.

Upton County

P. Fox No. 1 Cordova Union, sec. 17, Blk. 1, M.K.&T. Sur. Drlg. 910 ft.
G. P. McCamey No. 1 Cordova Union, sec. 19, Blk. 1, M.K.&T. Sur. Drlg. 276 ft.
Perry & Breeding No. 1 Cordiva-Union, 2,980 ft. from N and 330 ft. from W, sec. 1, M. Huggins Sur. S.D. 15 ft.

Ward County

Gulf Oil Corp. No. 1 W. A. Estes, sec. 38, Blk. 34, H.&T.C. Sur. T.D. 2,460 ft; set csg.
P. Moran et al No. 1 Reynolds, sec. 12, Blk. 5, H.&T.C. Sur Drlg. 755 ft.
Peck et al No. 2 Reynolds, sec. 12, Blk. 32, H.&T.C. Sur. Drlg. 2,239 ft.

Winkler County

Herbert Oil Co. No. 1 I. Hendrick, sec. 14, Blk. 26, S.D. 3,031 ft.; flwg. 30 B.P.D.
Fred Hyer No. 1 Evans, sec. 8, Blk. 58 Drlg. 4,615 ft.
Joiner No. 1 Evans, sec. 46, Blk. 73, P.S.L. Sur. Drlg. 4,236 ft.
Navarro Oil Co. No. 1 Drane, tr., sec. 35, Blk. 26, P.S.L. Sur. Drlg. 2,524 ft.
Read & Duffey No. 1 Sealey, sec. 8, Blk. A, G.M.M.B.&A. Sur. Spudded.

Yoakum County

Bahan et al No. 1 Henard, C SW ¼, sec. 367, Blk. D, J. H. Gibson Sur. Drlg. 2,631 ft
Stogner et al No. 1 Roosevelt, sec. 215, Blk. D, John H. Gibson Sur. Drlg. 2,300 ft.

FIELD GEOLOGY

By Dr. F. H. Lahee

Chief Geologist, Sun Oil Company

5 x 7½; 789 pages; 538 illustrations

From the review by L. G. E. Bignell, Petroleum Engineering Editor, The Oil and Gas Journal:

"Dr. Lahee is very well known to the oil industry, and is an advanced student of geology as applied to oil field problems. He has viewed those problems from both a scientific and economic angle, and his conclusions are well taken and should prove of value to all who have any interests in the future development of the petroleum industry. This third edition (1931) has special reference to several methods of scientific research in structural geology that were developed since the previous edition was published. This subject is treated in such a manner that much information is given in a limited space, and many questions asked by the layman, as well as the experienced geologist, are answered."

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THE OIL AND GAS JOURNAL

Tulsa, Oklahoma

PERSONAL

W. H. STUEVE, in charge of oil industry power sales for the Oklahoma Gas & Electric Company, received a professional degree as mechanical engineer from the Ohio State University at Columbus, Ohio, at commencement exercises recently. The honor was conferred in recognition of Mr. Stueve's work for the past 10 years in devising and improving the use of electric power in the oil transporting industry. Mr. Stueve already had degrees from Ohio State University in both electrical and mechanical engineering. Several years ago he was asked by the university faculty to prepare a thesis on "Engineering Problems Encountered in Pipe Line Design." The preparation of this thesis required work equivalent to several years of college study.

W. F. KOSTELKA, sales manager for Grogan Oil Company, Shreveport, La., has been out of the city for several days.

C. A. FRY, representative for the Baker Oil Tool Company, has been transferred from Long Beach, Calif., to Midland, Tex.

KNOX BATTEN, head of the newly created Louisiana legal division of the Phillips Petroleum Company, has been transferred from Amarillo, Tex., to Shreveport, La.

B. J. CRAFT, head of the petroleum engineering department at Louisiana State University, is now doing research work for Gas Power, Inc., with offices at Houston, Tex.

C. M. LEONARD, president of the Shoreline Oil Company and the Leonard Company, both of Shreveport, La., is visiting at the Chicago office of the Shoreline company this week.

L. M. MORLEY, general sales manager of the Minneapolis Honeywell Regulator Company of the Brown Instrument Company division with headquarters at Philadelphia, Pa., spent several days at the company offices at Houston, Tex., the past week.

FRAN EVERS, scout for Kirby Petroleum Company; GEORGE STAFFORD, scout for Sun Oil Company, and MARION YOUNG, scout for Houston Oil Company with headquarters at Houston, Tex., have returned after spending their vacation in the East.

R. C. BARBOUR, superintendent of production for the Humble Oil & Refining Company, has been transferred from Midland, Tex., to Tyler, Tex. W. T. DOHERTY is being transferred from the company's offices in Houston, Tex., to take charge of the West Texas operations of the company.

GENTRY KIDD, geologist with the Stanolind Oil & Gas Company, has been transferred from West Texas to San Antonio, Tex., where he will assume charge of that office.

J. C. LEGRAND has recently returned from a trip to California and has been made division manager for Schlumberger Well Surveying Corporation with headquarters in Houston, Tex. Mr. LeGrand was in Oklahoma this week on a business trip.

AXTELL J. BYLES, president of the American Petroleum Institute, has appointed J. EDGAR PEW of Philadelphia, Pa., and EDWIN S. HALL of New York, as institute delegates to the third World Power conference to be held in Washington, D. C., September 7 to 12.

P. D. MELLON, general superintendent of the Canadian Western Natural Gas, Light, Heat & Power Company of Calgary, Alberta, will address the joint convention of the Canadian Gas Association and the Northwest Pacific Gas Association at Vancouver, British Columbia, between July 8-10 on the repressuring of the Bow Island field with Turner Valley gas.

JOHN O'NEIL, of the Santa Clara Oil Company, San Antonio, Tex., is on an extended trip to California, his home state.

RODNEY DeLANGE and GEORGE COATES, oil operators of San Antonio, Tex., are traveling in Europe. They will be gone several weeks, visiting European oil fields while there.

EARL C. FRATES, geologist of San Antonio, Tex., and his bride, the former MRS. KEITH SIMPSON PHINNEY, are touring Europe. Upon their return they will make their home in San Antonio.

L. B. LEVERICH has succeeded THEODORE GROSS as lease foreman for the Gulf Refining Company in the Crystal-Montcalm field, central Michigan. Mr. Gross is new foreman for the Burnstein Oil & Gas Corporation, operator in the same field.

W. R. REED of Tulsa, utility assistant to PRESIDENT JOHN R. MANION of the Sinclair Prairie Pipe Line Company, has been advanced to general superintendent of that company, succeeding the late JAMES V. BLAKE. Mr. Reed will have his headquarters in Independence, Kans. W. E. MORRISON, division superintendent with headquarters at Shawnee, Okla., has been made assistant general superintendent with headquarters at Tulsa. BEN M. HORSLEY of Oklahoma City, Okla., has been made district foreman at Shawnee.

Do You Remember?

From The Oil and Gas Journal Files

25 YEARS AGO

The rumored "invasion" of the United States by the Royal Dutch-Shell syndicate in competition with the large marketing companies in this country, is arousing interest.

The largest carbon black plant in the world is that of Godfrey L. Cabot, of Boston, Mass., on the Little Kanawha River in Calhoun County, West Virginia. It consumes 9,143,560 feet daily on an average through 1,265 gas jets or burners. Mr. Cabot has a string of plants in the West Virginia gas fields.

John W. Gates, of the Texas Co., is seriously ill in Paris, France, and fears are entertained that he will not recover.

The Northwestern Oil Company, composed by Harry and Earl Sinclair, P. J. White and R. S. Litchfield, has three new wells on one lease in Osage County, Oklahoma, averaging 4,000 barrels per day each. They have 11 big producers on the lease for which they paid the Indians $50,000 in bonus.

20 YEARS AGO

A blind ex-clergyman living on a heavily-mortgaged 80-acre farm in the Eldorado, Kansas, field, with his family of 10 children, had his prayers answered when oil was "struck" on his place and now he has an income of $300 per day.

The Eldorado-Augusta field in Kansas is glutting the market with oil and the Prairie Oil & Gas Company has found it necessary to prorate purchases in the field. The field is producing 30,000 barrels per day.

Cornelius Vanderbilt, New York financier, is a Tulsa visitor, and is being entertained by the Chamber of Commerce.

10 YEARS AGO

Unusually big shots of nitroglycerin are used in the Panhandle Texas field. For every barrel of new production last week 2 quarts of glycerin was used to obtain it.

South Penn Oil Company completes a 415-barrel well in the old Ritchie County field, West Virginia. It is No. 4 Clyde Atkinson in the Grant district.

GEORGE W. STRAKE, oil operator of Houston, Tex., left last week for a vacation to be spent in Europe.

CHARLES DANIELS, division production superintendent for the Phillips Petroleum Company, is leaving this week on a vacation trip into Mexico.

VAN BENNETT, petroleum engineer, British-American Oil Producing Company, Tulsa, is in the Cut Bank field, Montana, for the time being on company business.

OTTO DEATS, associated with Ungren and Frazier, independent operators of Abilene, Tex., was married to MISS SUSAN REYNOLDS of Albany, in that city, on the evening of June 28.

J. O. HOLLOWAY, superintendent for the Humble Oil & Refining Company at Gladewater, Tex., is being transferred to Talco and placed in charge of the company's operations in that field.

W. S. MORRIS, proration engineer, Indian Territory Illuminating Oil Company, Oklahoma City, Okla., recently passed the bar examination for Oklahoma and is now a full fledged attorney.

EDWIN W. SANDISON, president of the Regan Forge & Engineering Company, and JAMES (PEEM) PEGG, chief engineer of production, left San Pedro, Calif., for a five weeks' business trip through the oil fields of New Mexico, Texas, Oklahoma, Louisiana, and Kansas. At Oklahoma City, Okla., they will be joined by W. S. PROCTOR of the Bettis Sales Company, Mid-Continent distributor of Regan drilling equipment.

PARAGRAPHS

GEORGE B. McCAMEY, of Fort Worth, Tex., president of Cordova Union Oil Company, was a business visitor several days last week at the company's home office in New York City. He returned to Texas via Chicago.

HOWARD D. ATHA, of Mount Pleasant, Mich., president of the Oil and Gas Association of Michigan and a leading figure in the Michigan oil industry, recently was elected a director of the Pennsylvania Grade Crude Oil Association.

DON J. SMITH, public relations director for Pan American Oil & Transport Co., of New York, left this week for a business trip to Texas City, Tex., where the company is now carrying on an extensive construction program at its refinery. He will return to New York in about two weeks.

GEORGE W. HAYWOOD, formerly secretary of the New Bedford Cordage Company, has been elected vice president. He has been with the company for about 12 years. Mr. Haywood succeeds the late W. W. TOTTEN, who was sales manager and vice president at the time of his death in November, 1935.

ROBERT E. SPEER, formerly assistant geologist with the United Natural Gas Co. in Oil City, Pa., recently accepted a position as an analytical engineer in the production department of Phillips Petroleum Company at Bartlesville, Okla. Mr. Speer graduated from Ohio State University in 1931, where he studied mining engineering.

EDWARD H. WOEHRLE has been transferred from the research department of Phillips Petroleum Company to the sales engineering department at Bartlesville, Okla. In his former position his time was spent in traveling throughout the marketing territory of his company. Mr. Woehrle is a petroleum engineering graduate of the University of Minnesota.

W. V. BUTLER, of the Socony-Vacuum Oil Company, Detroit, Mich., and HENRY G. HUNT, executive secretary of the Oil and Gas Association of Michigan, Mount Pleasant, Mich., will represent the Michigan Petroleum Industries Committee at a conference of several state committees in Chicago, July 8 to 10. Mr. Butler is chairman of the Michigan committee.

P. D. MELLON, chief engineer; H. E. TIMMINS, sales manager, and FRED HEUPERMAN, assistant engineer of the Canadian Western Natural Gas, Light, Heat & Power Company of Calgary, Alberta, recently established a new speed record for inspection. They flew by Stinson monoplane from Calgary to Brooks, thence to Bow Island and later to Lethbridge, returning to Calgary all in the same day.

COL. W. C. O'FERRALL, for 16 years in charge of the production in Arkansas for the Standard Oil Company of Louisiana, will join the Lion Oil & Refining Company organization effective August 1. Colonel O'Ferrall will be placed in charge of the company's production operations in Arkansas, Louisiana, Texas and Kansas. Colonel O'Ferrall's headquarters will be in El Dorado, Ark. With the discovery of oil in Arkansas in 1921, Colonel O'Ferrall was assigned to duty as division superintendent in charge of production for the Arkansas district for the Standard Oil Company of Louisiana. He developed that company's holdings in the El Dorado, Smackover and Stephens fields. When the Standard acquired the production property of the Humble Oil & Refining Company in the Irma field near Waterloo, Ark., he took charge of production at that point and developed Standard's properties there. During the war Colonel O'Ferrall commanded the 140th Field Artillery Regiment and served overseas with his regiment for a year.

A. F. CRIDER, consulting geologist of Shreveport, La., is visiting in Fort Worth, Tex., this week-end.

K. D. SCHMIDT, Tide Water geologist in Shreveport, La., has been on a business trip to the Tide Water offices in Houston, Tex.

PLEAS O. HARDWICK, sales manager for Atlas Oil Corporation, Shreveport, La., will be on a business trip to eastern points for the next week.

HOWARD E. FELT, secretary of the Warren Petroleum Company, left Tulsa last Saturday, accompanied by his family, for Chautauqua Lake, New York, where they will spend a month's vacation. The trip was made by motor.

RUSSELL W. GRIMES, of Houston, Tex., geologist for the past 10 years with the Shell Petroleum Corporation, has resigned his position, effective July 1, to become an independent operator and consulting geologist.

JOHN M. GIBSON is now employed by Phillips Petroleum Company in the production department at Bartlesville, Okla. He had been employed by Peoples Natural Gas Company in Pittsburgh, Pa., since his graduation from the University of Pittsburgh in 1934.

R. B. GRIGSBY, Stanolind Oil & Gas Company, has been elected president of the newly formed Lake Charles (La.) Geological Society. C. IVAN ALEXANDER, Magnolia Petroleum Company, is vice president; J. B. STONE, Shell Petroleum Corporation, treasurer, and JAMES S. KIRKENDALL, Amerada Petroleum Corporation, secretary.

Veteran Is Still Young

S. Messer's record as an executive in the Pennsylvania grade crude oil industry is built upon 41 years of experience. In appearance and energy, however, the president of Quaker State Oil Refining Company gives no evidence of this long service. Born near St. Petersburg, Clarion County, Pennsylvania, Mr. Messer has spent his entire life in the Pennsylvania oil-producing district. In 1895 he entered the employ of the Emlenton Gas, Light and Fuel Company. Two years later he went to the Emlenton Refining Company, which then was a partnership composed of H. A. Jamieson, P. J. Bayer and C. H. Hatton, originally known as Bayer-Hatton & Company. The plant in Emlenton, Pa., was built in 1891 by producers in that vicinity. The company failed and was bought at a receiver's sale by F. W. Mitchell, of Franklin, from whom Bayer-Hatton & Company purchased it. Mr. Messer was named treasurer of the company in 1904. In 1917 he was elected a director. In the same year he was elected president of the National Petroleum Association, and was reelected the following year. Shortly after taking the N.P.A. presidency, Mr. Messer was chosen as the sixth member of the National Petroleum War Service Committee, continuing until the close of the war. In 1923 Mr. Messer, with others, founded the Pennsylvania Grade Crude Oil Association.

S. MESSER

MATT COLLINS has returned to Petrolia, Ontario, after some years in the Trinidad fields.

M. J. FLANAGAN, of Tulsa, vice president of the Gaso Pump & Burner Manufacturing Company, has returned from an eastern trip.

T. E. MEECE, operations manager of Arkansas-Louisiana Gas Company, Shreveport, La., is attending to business matters out of the city this week.

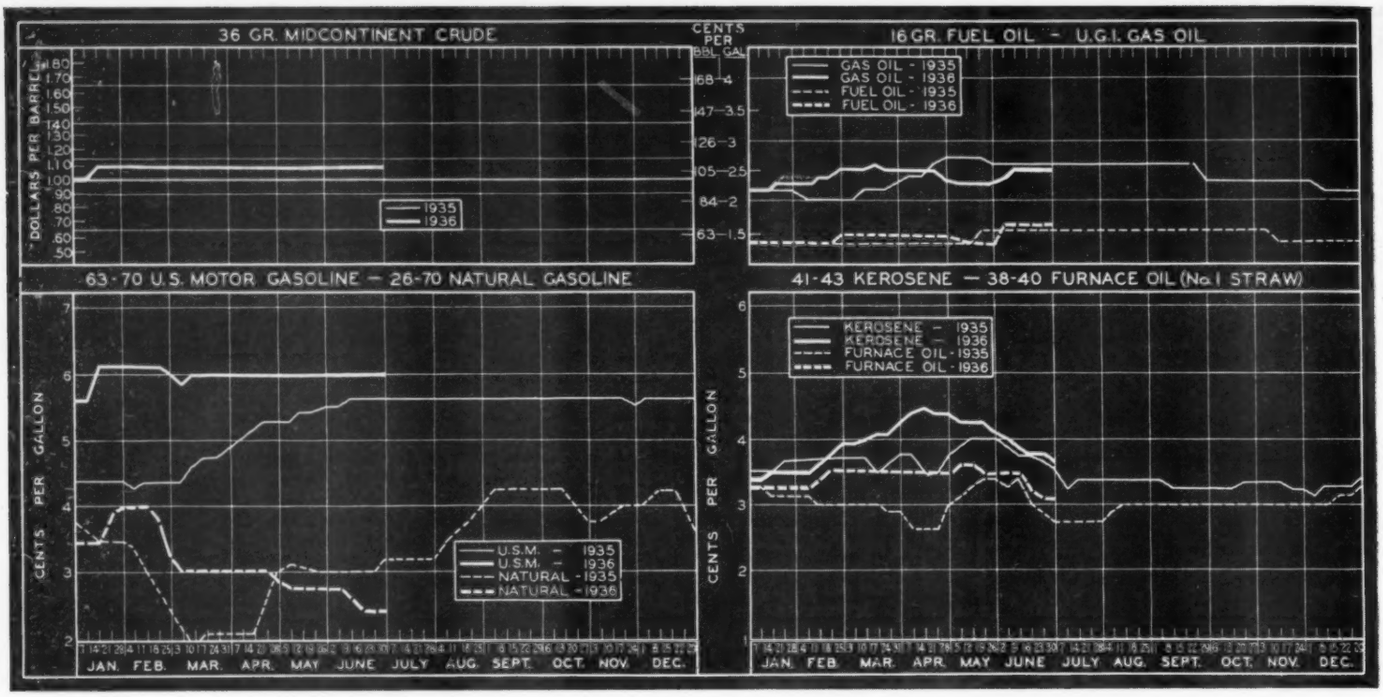
HOMER THORNHILL, vice president of Thornhill-Craver Company at Houston, Tex., announced the arrival of a 7½-pound baby girl on June 24.

E. H. SALRIN, vice president of the Tide Water Oil Company, and T. A. HALL, petroleum engineer with headquarters at Houston, Tex., are on an extended business trip to New York.

LEWIS EMERY, of Bradford, Pa., globe-trotting oil man, sailed on Saturday from New York for an Italian port. He will travel in Europe this summer. Mr. Emery only recently returned from a trip around the world.

EDWARD V. O'ROURKE, professor of mining and petroleum engineering at Ohio State University, Columbus, Ohio, is doing special work in the production department of Phillips Petroleum Co. this summer in Oklahoma.

FRED G. PETERS, of Lethbridge, Ontario, on June 29 sailed from New York for Colombia, South America, to join the Tropical Oil Company staff. Mr. Peters was presented with a pen and pencil set by the office force of the Canadian Pacific Railroad at Lethbridge on the eve of his departure from that city.



Representative Mid-Continent Quotations on Crude Oil and Refined Products. Basis Oklahoma (Group 3)

Gasoline Demand for Double Holiday Draws Heavily on Group 3 Stocks

By T. F. SMILEY

Gasoline demand preliminary to the double holiday which the calendar-makers have provided for this week rose to record volume in the Group 3 area, according to available reports. All signs indicated that highways would be filled with pleasure cars Independence Day and Sunday. Confidence that the tankcar market would acquire greatly increased vigor as the vacation season gets under way was strengthened by the evidences of unprecedented consumption of motor fuel.

BIG DENT IN INVENTORIES

The trade felt much better after reading figures showing withdrawals of 1,426,000 bbls. from total stocks of finished gasoline in one week, the largest reduction in any seven-day period thus far this year and making an impressive dent in the burdensome inventories with which the refining industry entered upon its season of heaviest consumption. A drop in runs to stills reported by the American Petroleum Institute added to the brightened outlook.

Gratification over the shrinkage in total gasoline stocks was qualified in the Group 3 area by the fact that Mid-Continent refiners' own inventories did not sink in the same proportion as did those of the country at large. However, their runs to stills were being kept within bounds, and as consumer demand was keeping them busy filling orders on contract they saw no reason for complaining about the market prospect. A development commented upon in the trade is the fact that spot sales, as compared with those of other years, comprise a small proportion of tankcar gasoline business. An increasingly large part of the total movement has been on contract.

Reports from East Texas indicate a trouble-free situation. Motor travel growing out of the state's centennial celebration, with its big fair at Dallas, has so stimulated motor fuel demand that interstate shipments out of East Texas have fallen off and intrastate movement has experienced a sharp rise. More than half the output of East Texas refineries is now being sold inside the state, according to available figures. Some refiners have discontinued tankcar shipments outside the state altogether and are disposing of their material to truck purchasers. By this change they avoid the worries that go with credit business, as they receive cash on delivery. Furthermore, in the case of sales to brokers, they save the eighth-cent discount which customarily is accorded. Adding to the improved conditions is the reported movement of 1,000,000 gallons of gasoline to the Gulf Coast, presumably for export shipment. This, along with the steady local demand, is said to have left little material in East Texas looking for buyers. Inquiries pointing to further shipments to the Gulf are reported.

NATURALS CONVALESCENT

Natural gasoline, which has suffered from prolonged illness, was beginning to show signs of convalescence. Its better tone was attributed to more generous buying by both domestic and export users. The demand is chiefly for 18-pound.

Kerosene was soft, with lower quotations prevailing. Some refiners who were buying this material a few weeks ago are now sellers. Tractor fuels, close companion of kerosene in all the latter's movements, were also easier. Any dullness in these materials, however, is likely to be of short duration, for large-scale threshing operations will soon be under way. The spring business in kerosene and tractor distillates has been far from unprofitable, but it has disappointed many refiners through its failure to reach heights expected. In some areas spring plowing was delayed and in others seriously curtailed by adverse weather conditions. A common expectation three or four months ago was that kerosene, impelled by active agricultural demand, would command a higher price than third-grade gasoline, as it has done at times in the past. This expectation failed of fulfillment.

A satisfactory movement of neutrals and bright stocks was reported, with no indications of weakness. Gas oil and fuel oil continued steady. Some observers expressed belief that the whole range of burning oils was headed for a vigorous market.

Refined Oil Market Barometer

Substantial withdrawals from the country's huge stocks of gasoline, along with reports of heavy buying in preparation for the approaching double holiday, have imparted a healthier tone to the motor fuel market. Firming of prices is noticeable, and belief is growing that the end of the heavy consuming season will find inventories at a satisfactory level. Gas oil and burner oils are improving.

MID-CONTINENT. Gasoline firmer. Naturals slightly steadier. Kerosene sluggish.

EAST COAST. Heavy consumption brightens gasoline market. Furnace oils steady.

GULF COAST. Gasoline slightly stronger.

PENNSYLVANIA. Gasoline strengthening. Fuel oils softening.

CALIFORNIA. Gasoline market firm.

CHICAGO. Gasoline gaining strength. Burning oils slack.

Eastern Marketers Prepare to Handle Record Holiday Gasoline Demand

NEW YORK, June 30.—Preparations to handle a record July 4 gasoline demand occupied the attention of eastern marketers this week. Conditions in portions of New England and occasional revival of "dollar bargains" in metropolitan New York stations were virtually the only causes for concern. Binghampton, N. Y., near the Pennsylvania line, is the outstanding low-pressure area at the present in the eastern marketing territory. Most marketers lowered service-station prices a cent on June 25 to 13½ cents a gallon, making the tank-wagon quotation 10 cents to divided dealers. Providence, R. I., and Poughkeepsie, N. Y., were other areas lagging behind the average market.

Heavy consumption in all quarters continues to keep the spirit of marketers running high, and only casual attention is given to the occasional outbreaks of price-shading.

Metropolitan New York service-station operators are still combating the bargain offers of 6 gallons of house-brand gasoline for 98 cents, but the practice is restricted to a comparatively few outlets, and is actually causing little concern at the moment. The bargain signs are put up and taken down so frequently that even close observers of market conditions cannot keep abreast of the changes. Frequently stations have opened for the morning business with signs offering 6 gallons for 98 cents prominently displayed, but by noon the regular posting of 19.2 cents a gallon, including state and federal tax, prevails.

Without exception, marketers are preparing for record motor fuel consumption over July 4, with vacation season following immediately to give every cause for continued optimism. Movement of gasoline from refiners' storage to bulk plants and to service-station containers for immediate accessibility to motorists is at its peak and will continue to engage facilities of the marketing branch for a week. While the weather will be a factor in consumption, even the most severe conditions possible at this season of the year will not keep motorists off the paved highways, in the opinion of marketers who have studied this situation.

The extensive preparations made by all retailers to supply the Independence Day business has materially strengthened the tankcar market tone, although prices have not advanced so far. There was some talk in trade circles that the market might be boosted a cent in areas where stability prevails prior to July 4, but there has been no definite move made to date. It appears that marketers are unwilling to take the lead in advancing prices, and that they probably will be content to enjoy the increased consumption rather than take a chance on backfire from a raise. Continued inability of several French refiners to operate, due to labor difficulties, is aiding the export market, particularly on the Gulf Coast, where two cargoes were reported moved last week at 5½ cents a gallon. Necessity for maintaining stocks in the equivalent of 33⅓ per cent of the license grant in France has forced several marketers in that country to draw on the open market in this and other countries until normal refinery operations are resumed in France. While the French demand is a temporary stimulant to the Gulf Coast and other sources of open-market supply, the two cargoes shipped to that country last week mean nothing in terms of increased consumption. The movement and the possibility that other shipments may be made later did, however, bolster the Gulf Coast refinery gasoline market. The price of 5½ cents per gallon was up an eighth of a cent from some of the preceding week's offerings.

One of the most satisfactory elements in the marketing picture is the continued brisk consumption of diesel-engine fuel at $1.65 along the Atlantic seaboard and the strength of bunker C oil at $1.05 a barrel.

Although entering a season when consumption will be virtually halted for two or three months, furnace-oil prices are holding steady, and marketers report that contract business for the coming winter is being booked at a satisfactory rate. None of the refiners in position to supply furnace oils in quantity are willing to shade prices. There is a little material moving on a spot basis slightly below prices generally quoted, but the quantity is limited and the sales are not considered indicative.

Kerosene for export on the Gulf Coast is slightly easier and is being offered at 3⅛ to 3⅝ cents, off an eighth cent from last week's quotations.

Lubricating oils are steady with demand holding firm in ratio to increased consumption of gasoline. There are no indications of variations in the prices generally quoted in either direction.

Export wax trade is practically at a standstill, but greater quantities are being handled to domestic consumers at unchanged prices ranging from .0445 to .0560 cent a pound for the fully refined material.

Inclination of refiners along the Atlantic seaboard to make early preparations for another heavy call on fuel oil next winter is apparent in several quarters. This preparation may avert, to some extent at least, repetition of last winter's conditions, when considerably more gasoline was made than advisable or necessary in order to meet demand for furnace oil. Some refiners are approaching the problem by processing as much crude as possible which yields a small gasoline cut, and in so doing are enabled to make slight reductions in their gasoline inventories. However, only a few companies have access to a flexible crude supply which will permit extensive exercise of option in charging stock. The distinct impression, however, is conveyed by oil companies that they will not again engage in wholesale additions to gasoline stocks for the secondary purpose of supplying fuel oil.

The draft of nearly a million and a half barrels on gasoline stocks last week was particularly helpful to the East Coast district. About 627,000 bbls., or 43 per cent of the total draft on gasoline stocks in finished and unfinished form were withdrawn from the East Coast territory.

Divestment of company-owned and operated service stations in Raleigh and Salisbury, N. C., has been completed by Standard Oil Co. of New Jersey in pursuit of its policy of gradually transferring retail outlets to dealers. The program of marketing through dealer lessees is approximately 75 per cent complete in New Jersey. the Standard of New Jersey's stronghold in the sales field. Other companies in the eastern area are transferring outlets to lessees as rapidly as practical.

In view of the success the lessee-dealer plan has experienced in Iowa and earlier by other companies which pioneered the system, little change in retail conditions is expected by the refining and marketing companies. Tank-wagon and consumer tankcar prices will continue to be posted and adjusted by the refining and marketing divisions of the companies, but the retail postings and methods of operation will be vested in the lessees.

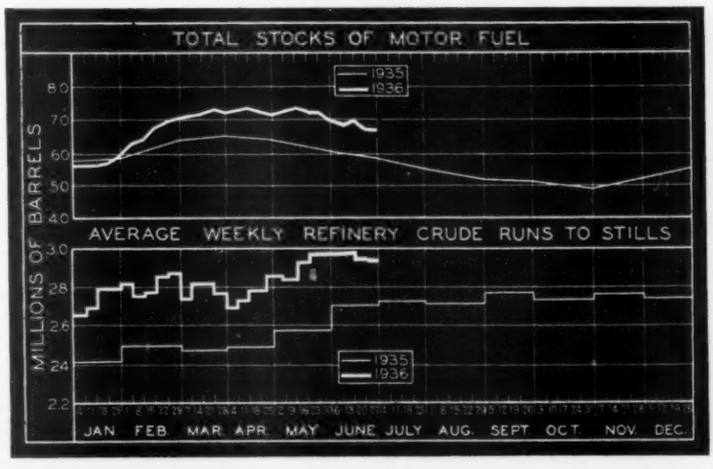
The spread of chain-store taxes in various states and provisions in the Patman bill, signed recently by President Roosevelt, have hastened abolishment of company-owned and operated stations. By leaving the retail postings exclusively in hands of the lessees, companies can avoid price clashes with independent operators. Meeting of competitive prices by companies in the past has been frowned upon by state and federal officials and has been the foundation for vociferous complaint of monopoly from various independent associations in the oil business.

A. P. I. Weekly Refinery Statistics

Week Ending June 27, 1936

	Capacity reporting (per cent)	Daily crude runs (bbls.)	Total gasoline stocks	Gas oil and fuel oil stocks
East Coast	100.0	534,000	19,273,000	9,677,000
Appalachian	94.8	108,000	2,554,000	462,000
Indiana, Illinois, Kentucky	96.1	409,000	9,597,000	4,131,000
Oklahoma, Kansas, Missouri	84.8	292,000	6,815,000	3,382,000
Inland Texas	48.5	104,000	1,429,000	1,863,000
Texas Gulf	96.8	562,000	7,555,000	7,752,000
Louisiana Gulf	96.4	118,000	1,462,000	2,024,000
North Louisiana and Arkansas	90.0	44,000	418,000	409,000
Rocky Mountains	61.9	47,000	1,377,000	771,000
California	92.6	522,000	13,229,000	71,873,000
Total reported	89.7	2,740,000	63,709,000	102,344,000
Estimated unreported	.....	190,000	4,732,000	2,941,000
*Estimated total	.....	2,930,000	68,441,000	105,285,000
*Estimated total previous week	.....	2,950,000	69,214,000	104,728,000
†June 30, 1935	.....	2,724,000	59,507,000	103,674,000

*Bureau of Mines basis currently estimated. †Monthly report, U. S. Bureau of Mines.



RETAIL OIL MARKETS

Tank-wagon and filling station prices on gasoline and kerosene furnished by the larger marketing firms

Prices as of June 30, 1936

Taxes

The gasoline quotations given in the following tables include the 1-cent federal tax, as well as state, county and city taxes. The gasoline is the regular or standard grade. In most areas a third grade and a premium grade are also available.

Discounts

Under the standard form of commercial consumer contract which went into effect March 1, 1934, save in California, Oregon, Washington, Arizona and Nevada, a discount of 1 cent a gallon off tank-wagon or 3 cents a gallon off retail prices is permitted for purchases between 4,000 and 10,000 gallons per month, or 4 cents a gallon off retail prices for purchases in lots of more than 10,000 gallons a month. The minimum delivery is 25 gallons.

Standard Oil Co. (Indiana)

	Gasoline Tank wag.	Gasoline Serv. sta.	Gasoline Inc. tax	Kero. tank wag.
Chicago	15.5	17.5	4.0	10.1
Decatur, Ill.	16.0	18.0	4.0	10.1
E. St. Louis	15.7	17.7	4.0	9.8
Joliet	14.5	17.5	4.0	10 1
Peoria	16.0	18.0	4.0	10.1
Quincy	15.8	17.8	4.0	9.9
Davenport, Ia.	16.0	(†)	4.0	10.1
Des Moines	15.8	(†)	4.0	9 9
Mason City	16.2	(†)	4.0	10.3
Sioux City	16.0	(†)	4.0	10.1
Duluth, Minn.	16.8	18.8	4.0	10.9
Mankato	16 4	18.4	4.0	10.5
Minneapolis	16.4	18 4	4.0	10.5
LaCrosse, Wis.	17.4	19.4	5.0	10.5
Green Bay	17.7	19.7	5.0	10.8
Milwaukee	16.3	18.3	5.0	10 4
Madison	17.4	19.4	5.0	10 5
Detroit, Mich.	15.0	17.0	4.0	8.8
Grand Rapids	16.4	17.4	4.0	9.3
Saginaw	15.6	17.6	4.0	10.1
Evansville, Ind.	17 7	19.7	5.0	10.6
Indianapolis	17.9	19.9	5.0	10.8
South Bend	18.1	20.1	5.0	11.0
Fargo, N. Dak.	17.4	19.4	4.0	11.5
Huron, S. Dak.	17.9	19 9	5.0	11.0
Sioux Falls	17.4	19.4	5.0	10.5
Kans. City, Mo.*	15.4	17.4	4.0	8.0
Springfield	15.1	17.1	4 0	9.2
St. Louis	15.7	17.7	4.0	9.8
St. Joseph*	15.4	17.4	4.0	9.5
Wichita, Kans.	14.9	16.9	4 0	8.0
Bartlesville, Ok.	15.0	19.0	5.0	8.5

*State tax 2 cents, 1-cent city tax and 1-cent federal tax.

†Standard Oil Co. (Indiana) has leased all service stations in Iowa.

Discounts to dealers except in Iowa: 3½ cents on premium and regular and 2½ cents on third grade off service station prices; discounts to dealers in metropolitan Chicago one-half cent larger than rest of Standard of Indiana territory, namely 4 cents and 3 cents on respective grades. Dealers in Iowa sold at posted "Dealer Prices."

Stanolex Fuel Oil in Chicago

Effective June 1, 1936, f.o.b. Chicago tank-wagon prices: Range oil, less than 100 gallons, 8.75 cents; 100-149 gallons, 7.75 cents; 150 gallons and more, 7.25 cents. No. 1, less than 150 gallons, 7.5 cents; 150 gallons or more, 6.5 cents. Stanolex furnace oil, less than 150 gallons, 7.5 cents; 150 gallons or more, 6.5 cents. Stanolex fuel "A," less than 400 gallons, 5.75 cents; 400 gallons or more, 4.75 cents.

Southern District

STANDARD OIL CO. OF KENTUCKY

	Gasoline Tank wag.	Gasoline Serv. sta.	Gasoline Inc. tax	Kero. tank wag.
Atlanta, Ga.	20.5	22.5	7.0	*13.5
Augusta	20.0	22.0	7.0	*13 0
Macon	20.0	22.0	7.0	*13.0
Savannah	18.5	20.5	7.0	*12.0
Birm'ham, Ala.	20.0	22.0	8.0	11.0
Mobile	21.0	23.0	9.0	10.0
Montgomery	22.0	24.0	9 0	14.5
Jackson, Miss.	20.0	22.0	7.0	*12.0
Vicksburg	19.5	21.5	7.0	*13.0
Jacksonville, Fla.	18.0	20.0	8.0	10.0
Miami	19.5	21.5	8.0	13.5
Pensacola	21.5	23.5	9.0	12.0
Tampa	18.0	20 0	9.0	12.5
Lexington, Ky.	19.0	21.0	6.0	11 0
Covington	18.5	20.5	6.0	10.5
Louisville	19.0	21.0	6.0	10.0
Paducah	18.0	19.0	6.0	8.5

*Includes 1 cent state tax. Montgomery, Ala., has a county tax of 1 cent per gallon, and a city tax of 1 cent per gallon on gasoline, in addition to state tax; and 1 cent per gallon on kerosene. Mobile, Ala., has a city gasoline tax of 2 cents per gallon; Birmingham, Ala., has a city gasoline tax of 1 cent per gallon. Pensacola, Fla., has a city gasoline tax of 1 cent.

Rocky Mountain District

CONTINENTAL OIL CO.

	Gasoline Tank wag.	Gasoline Serv. sta.	Gasoline Inc. tax	Kero. tank wag.
Denver, Colo.	19.0	21.0	5.0	11.0
Pueblo	19.0	21.0	5.0	13.0
Grand Junction	21 5	23.5	5.0	15.0
Casper, Wyo.	19.5	21.5	5.0	11.5
Cheyenne	19.5	21.5	5.0	13.0
Butte, Mont.	21.0	....	6.0	14.5
Billings	22.5	24.5	6.0	14 5
Helena	22.5	24.5	6.0	17.5
Great Falls	22.5	24.5	6 0	14.5
Salt Lake, Utah	21.0	23.0	5.0	16.0
Twin Falls, Ida.	23 0	25.0	6 0	18.0
Boise	22.5	24.5	6.0	18.0
Albu'que, N. M.	18.5	20.5	*6.5	13.0

*Includes one-half cent city tax.

Discount to dealers with or without contract in Continental territory: Undivided dealer discount off service station price, 4 cents; divided dealer accounts, 3½ cents.

Pacific Coast Territory

STANDARD OIL CO. OF CALIFORNIA

	Gasoline Tank wag.	Gasoline Serv. sta.	Gasoline Inc. tax	Kero. tank wag.
San Francisco	17.0	18.0	4.0	11.5
Los Angeles	16.5	17.5	4.0	9.0
Fresno, Calif.	17.5	18.5	4.0	11.0
Phoenix, Ariz.	21.0	22.0	6 0	‡16.0
Reno, Nev.	19 5	20.5	5.0	13.0
Portland, Ore.	19.5	20.5	6.0	13.5
Seattle, Wash.	19.5	20.5	6.0	13.5
Tacoma	19.5	20 5	6.0	13.5
Spokane	22.5	23 5	6.0	16.5

*Retail prices posted by Standard Stations, Inc., a subsidiary.

†Prices are at company's plant or depots, as company does not operate stations. A 4-cent per gallon discount is given dealers and customers taking tank-wagon lots except in Phoenix where discount is 1 cent. ‡Includes 5-cent state tax.

Atlantic Coast District

STANDARD OIL CO. OF NEW JERSEY

	Gasoline Tank wag.	Gasoline Serv. sta.	Gasoline Inc. tax	Kero. tank wag.
Atl'tic City, N.J.	14.0	17.5	4.0	9.0
Newark	14 0	17 5	4.0	7.5
Annapolis, Md.	15.6	19.1	5.0	10.0
Baltimore	15.0	18.5	5.0	8.0
Cumberland	16.6	20.1	5.0	12.7
Wash'g'n, D. C.	13.0	16.5	3.0	9.0
Danville, Va.	17.5	21 0	6.0	12.9
Norfolk	16 0	19.5	6.0	11.3
Petersburg	16.5	20.0	6 0	11.7
Richmond	16.5	20.0	6.0	11.7
Raonoke	17.5	21.0	6.0	12 9
Charles'n, W. Va.	15.8	19.3	5.0	12.6
Parkersburg	15.1	18.6	5.0	11.2
Wheeling	15.0	18.5	5.0	12.2
Charlotte, N. C.	18.4	21.9	7.0	12.6
Hickory	18.9	22.4	7.0	13 0
Mt. Airy	18.7	22.2	7.0	12 8
Raleigh	18.0	....	7.0	12.1
Salisbury	18.5	....	7.0	12.7
Charleston, S.C.	17.0	20.5	7.0	11.3
Columbia	18.3	21.8	7.0	12 6
Spartanburg	18.7	22.2	7.0	12.9

Tank-wagon gasoline refers to dealer instead of retail prices.

Price basis to dealers: Undivided dealers at regular price less one-half cent. Discount for kerosene, 1 cent off tank-wagon price for 25 gallons or more under contract (contract not necessary in Baltimore) except in New Jersey, where no discount (if necessary) is given.

Nebraska

STANDARD OIL CO. OF NEBRASKA

	Gasoline Tank wag.	Gasoline Serv. sta.	Gasoline Inc. tax	Kero. tank wag.
Omaha	18 4	20.4	6.0	10.4
McCook	19.1	21 1	6.0	11.1
Norfolk	18.8	20.8	6.0	10.8
North Platte	19.2	21.2	6.0	11.2
Scottsbluff	19.9	21.9	6.0	11.9

Note—Discounts to dealers: where service station gasoline prices are (maximum overall, including rent) as follows: Reliance, 2½ cents; Standard Red Crown, 3½ cents; Red Crown Ethyl, 3½ cents.

Where service station gasoline prices are below normal resellers' allowances are reduced one-half of the amount below normal, down to the following (minimum overall, including rent): Reliance, 2 cents; Standard Red Crown, 3 cents; Red Crown Ethyl, 3 cents. Discounts to consumers for tank-wagon deliveries covered only by standard commercial consumers contract, effective January 1, 1935.

Pennsylvania, Delaware and Part of New England

ATLANTIC REFINING CO.

	Gasoline Tank wag.	Gasoline Serv. sta.	Gasoline Inc. tax	Kero. tank wag.
Philadelphia, Pa.	16.5	17 5	5.0	9.5
Pittsburgh	17.5	19.5	5.0	10.0
Allentown	17.0	18.0	5.0	9.5
Erie	17.5	18.5	5 0	8.0
Scranton	16.75	17.0	5.0	10.0
Altoona	17.5	19.5	5.0	9.5
Dover, Del.	17.0	17.0	5.0	10.0
Wilmington	17.0	17.0	5.0	9.0
Springf'ld, Mass.	14.0	17.5	4.0	7.5
Worcester	14.0	17.5	4.0	7.75
Hartford, Conn.	13.5	17.0	4.0	7.0
New Haven	13.0	16.5	4.0	7.5
Providence, R. I.	12.5	16.0	3.0	7.0

Note—Tank-wagon prices are those applicable to consumers purchasing lots of 100 or more gallons in one delivery.

Central South District

STANDARD OIL CO. OF LOUISIANA

	Gasoline Tank wag.	Gasoline Serv. sta.	Gasoline Inc. tax	Kero. tank wag.
N. Orleans, La.	18 5	22.0	‡9.0	12.0
Baton Rouge	17.0	20.5	‡7.0	11.5
Alexandria	18.5	22.0	‡*8.0	11.0
Lafayette	19.0	22.5	‡*8.0	12.5
Lake Charles	19.0	22 5	‡*8.0	11.0
Shreveport	16.5	20.0	‡7 0	10.0
Knoxville, Tenn.	20.5	24.0	8.0	14.0
Memphis	19.0	22 5	8.0	11.0
Chattanooga	20.5	24.0	8.0	11.5
Nashville	20.0	23.5	8.0	10.0
Bristol	18.75	21.5	8 0	14.5

*Includes city tax of 1 cent.

†Includes 1-cent parish tax. ‡Includes 3-cent parish tax.

Tank-wagon gasoline refers to dealer instead of retail prices.

Price basis to dealers: Undivided dealers at dealer price less one-half cent.

Louisiana kerosene prices include 1-cent state tax.

New York and New England

SOCONY-VACUUM OIL CO., INC.

	Gasoline Post deal	Gasoline Serv. sta.	Gasoline Inc. tax	Kero. tank wag.
Albany, N. Y.	14.0	17.5	5 0	7.75
*Met. N. Y.				
Manhtn., Bronx	14.2	19.2	5 0	7.25
Staten Island	14.2	19.2	5.0	7.25
Qu'ns & Br'klyn	14.2	19.2	5.0	7.25
Buffalo	14.5	18.0	5.0	8.25
Rochester	14.5	18.0	5 0	8.25
Syracuse	14.5	18.0	5.0	8.75
Boston, Mass.	12.5	16.0	4.0	7.50
Portland, Me.	14.5	18.0	5.0	7.75
Manch'ter, N. H.	15.0	18.5	5 0	8.00
Burlington, Vt.	16.5	20.0	5.0	8.75

*Does not include 2 per cent city sales tax which is calculated on basis of net retail price exclusive of state and federal taxes.

Southwestern District

	Gasoline Tank wag.	Gasoline Serv. sta.	Gasoline Inc. tax	Kero. tank wag.
Dallas, Tex.	15.0	17.0	5.0	8.5
Fort Worth	15.0	17.0	5.0	8.5
Houston	16 0	18.0	5.0	8.5
San Antonio	16.0	18 0	5.0	8.5
El Paso	17.0	19.0	5.0	8.0
Muskogee, Ok.	17.0	19.0	5.0	8.0
Okla. City	17.0	19.0	5.0	8.0
Tulsa	17 0	19.0	5.0	8.0
Ft. Smith, Ark.	17.0	19.0	5.0	8.0
Little Rock	19.5	21.5	7.5	9.5
Texarkana	16.5	18.5	5.0	8.5

Naphtha

STANDARD OIL CO. (INDIANA)

	Tank wagon*
Oleum spirits	15.7
V.M.&P. naphtha	16.0
Cleaners' naphtha	15.0
Stanisol	15.0

*Prices include 3-cent Illinois tax, but not 1-cent federal tax or 2 per cent retail occupational tax.

Prices f.o.b. Chicago. Each price subject to discount of 1 cent per gallon for 150-gallon lots if covered by contract.

Ohio

STANDARD OIL CO. OF OHIO

	Gasoline Tank wag.	Gasoline Serv. sta.	Gasoline Inc. tax	Kero. tank wag.
Ohio points	17.5	19.5	5.0	*13.5

*Includes state tax of 1 cent.

Canada*

Imperial 3-Star Gasoline
IMPERIAL OIL, LTD.

	Gasoline Tank wag.	Gasoline Serv. sta.	Gasoline Inc. tax	Kero. tank wag.
Hamilton, Ont.	21.0	23.5	6.0	17.0
Toronto, Ont.	21.0	23.5	6.0	17.0
Brandon, Man.	30.8	33.8	7.0	23.8
Winnipeg, Man.	29.2	32.2	7.0	20.7
Regina, Sask.	29.5	32.5	7.0	22.0
Saskatoon, Sask.	32.3	35.3	7.0	24.8
Edmonton, Alta.	31.7	34.7	7.0	24.2
Calgary, Alta.	29.0	32.0	7.0	21.5
Vancouver, B. C.	26.0	29.0	7.0	24.0
Montreal, Que.	19.5	22.0	6.0	17.5
St. John, N. B.	25.0	29.0	8.0	19.5
Halifax, N. S.	25.0	29.0	8.0	19.5

*Imperial gallon used in Canada.

Discount to dealers: Divided dealers pay 3 cents per gallon below station price; undivided dealers pay 4 cents per gallon below station price except in cities of Hamilton, Toronto and Montreal where discounts below station price are one-half cent per gallon less.

Retail Price Changes

Standard Oil Co. (Indiana) June 29 advanced tank-wagon kerosene .9 cent in Wichita; June 2 advanced tank-wagon and station gasoline .5 cent in Detroit.

Standard Oil Co. of Kentucky June 19 reduced tank-wagon kerosene 1.5 cents in Macon.

Standard Oil Co. of Louisiana June 17 reduced tank-wagon and station gasoline .5 cent in Baton Rouge, Shreveport and Knoxville.

New York Motorists to Benefit from New Tax

The reduction of 1 cent per gallon in the New York state gasoline tax to 3 cents, effective July 1, will be passed on as a saving to motorists probably by all marketers. Leadership in passing on the reduced tax rate to the consumer was assumed in an official announcement from Socony-Vacuum Oil Co., Inc., one of the extensive marketers in the eastern territory. It was assumed by most other marketers that they would follow the same procedure.

Port Officials Oppose Galveston Drilling

HOUSTON, Tex., June 27.—Commissioners of the port at Houston this week voted unanimously against the drilling of any wells that might hinder traffic in the Houston ship channel.

D. A. Simmons, commission attorney, was appointed to draw the resolution. He pointed out the danger of explosions, blowouts, and said insurance rates were certain to be increased on ships using the channel.

Oil operators who have leased the submerged area in Galveston Bay for development will be notified of the commission's attitude. Leases were awarded by the state land commissioner. Salt Dome Oil Corp. and Humble Oil & Refining Co. are now making their first explorations on Galveston Bay leases. Other major companies holding leases in the area include the Sun Oil Co. and the Texas Co.

PRICES OF REFINED PRODUCTS

All quotations f.o.b. plant in cars for interstate or export movement except as otherwise noted

Prices as of June 30, 1936

The following quotations are exclusive of the federal excise taxes of 1 cent a gallon on gasoline and 4 cents on lubricating oils.

Refinery Gasoline

OKLAHOMA (Group 3)—

U. S. Motor grades:		
62 octane and below (3d. gr.)	.04¾	.05
63-67 octane	.05⅜	.05½
68-70 octane (regular)	.06	.06⅛
60-62 400 grades:		
62 octane and below	.04¾	.05
63-67 octane	.05⅜	.05⅝
68-70 octane (regular)	.06	.06⅛
64-66 375	.04⅞	.05⅛
68-70 360	.05	.05¼

NORTH TEXAS—

U. S. Motor grades:		
62 octane and below	.04¾	.05
63-67 octane	.05⅜	.05½
68-70 octane (regular)	.06	.06⅛
60-62 400	.04⅞	.05
64-66 375	.05	.05⅛

NORTH LOUISIANA (Ark., N. La. and Miss. delivery)—

U. S. Motor grades:	
62 octane and below	.05⅜
63-67 octane	.06⅛
68-70 octane (regular)	.06⅜
60-62 400	.05⅜ .06

ARKANSAS (Ark., N. La., Miss. del.)—

U. S. Motor grades:	
62 octane and below	.05⅜
63-67 octane	.06½
68-70 octane (regular)	.06⅜

CHICAGO (Based on Group 3)—

U. S. Motor grades:		
62 octane and below	.04¾	.05
63-67 octane	.05⅜	.05½
68-70 octane (regular)	.06	.06⅛
60-62 400 grades:		
62 octane and below	.04¾	.05
63-67 octane	.05⅜	.05½
68-70 octane (regular)	.06	.06⅛
64-66 375	.04⅞	.05
68-70 360	.05	.05⅛

PENNSYLVANIA (inland refineries)—

58-60 U. S. Motor:		
Below 60 octane		.05⅝
60-64.9 octane		.07
65-70 octane		.07¼
64-66 375		.05⅜
68-70 350		.06

CALIFORNIA (domestic movement)—

54-58 U. S. Motor	.07	.07⅜
58-60 400	.07½	.08¼

EAST COAST (domestic)—

U. S. Motor, below 60 octane:	
*New York (Bayonne)	.06½
Baltimore	.06½
U. S. Motor, 60-64.9 octane:	
*New York (Bayonne)	.06¾
Philadelphia	.06¾
Boston	.06¾
Baltimore	.06¾
Charleston, S. C.	.06¾
U. S. Motor, 65 and above:	
*New York (Bayonne)	.07
Philadelphia	.07
Boston	.07
Baltimore	.07
Charleston, S. C.	.07

*All grades of gasoline one-eighth to one-fourth cent less for barge shipments. New York harbor prices are for New York and New England delivery. Prices for New Jersey delivery one-fourth cent lower.

GULF COAST (domestic)—

U. S. Motor grades:		
Below 60 octane	.05⅝	.05¾
60-64.9 octane		.06
65 octane and higher	.06⅛	.06¼

Naphtha

PENNSYLVANIA (inland refineries)—

50-52 450 (blending)	.05½
52-54 450 (blending)	.05½
54-56 450 (blending)	.05⅝

Natural Gasoline

OKLAHOMA (Group 3)—

Grade 26-70		.02½
Grade 18-55	.03	.03¼
Low vapor pressure grade:		
*14 lb. v.p. (max.)	.03½	.03⅝
*12 lb. v.p. (max.)		.04

*Nominal.

NORTH TEXAS—

Grade 26-70	.02¼	.02⅜
Grade 18-55	.02⅜	.03

NORTH LOUISIANA (Ark., N. La. and Miss. delivery)—

Grade 26-70	.02⅜	.03

CALIFORNIA—

75-85 375-390	.07	.07⅝

Tractor Fuel

OKLAHOMA (Group 3)—

40-42 gr., 315-325 i.b.p., 110 flash, 540-550 e.p.	.03⅝	.03⅞
41-43 gr., 300-350 i.b.p., 110-125, flash, 500-520 e.p.	.03⅞	.04⅛
46-48 gr., 210-230 i.b.p., 480 max. e.p.	.04⅞	.05

Kerosene

(All kerosene water white)

OKLAHOMA (Group 3)—

41-43	.03⅝	.03¾
42-44	.03⅞	.04

NORTH TEXAS—

41-43	.03⅝	.03¾

NORTH LOUISIANA (Ark., N. La. and Miss. delivery)—

41-43	.04

ARKANSAS (Ark., N. La., Miss. del.)—

41-43	.04⅝	.04½

PENNSYLVANIA (inland refineries)—

45	.05¼	.05⅜
46	.05⅜	.05½
47	.05½	.05⅝

CHICAGO (Based on Group 3)—

41-43	.03⅜	.04
42-44	.04	.04¼

CALIFORNIA (Pac. Coast market)—

38-40 high burning test	.03¼	.05

NEW YORK (Bayonne, N. J.)—

41-43	.04⅝	.04⅞

GULF COAST (domestic)—

41-43	.03⅞

*Barge price one-eighth cent lower.

Furnace Oil

OKLAHOMA (Group 3)—

No. 1 prime white, 38-42	.03¼	.03½
No. 1 straw, 38-40	.03⅛	.03¼
No. 2 straw, 32-36	.02⅞	.03
No 2 dark, 32-36	.02⅝	.03
No. 3, 28-32	.02⅝	.02⅞
No. 3, 15 and above, 28-32	.02⅜	.02½

NORTH TEXAS—

No. 1 prime white, 38-42	.03⅜	.03½
No. 1 straw, 38-40	.03⅛	.03¼

NORTH LOUISIANA (Ark., N. La. and Miss. delivery)—

No. 2, 32-36	.02⅞	.03

ARKANSAS (Ark., N. La., Miss. del.)—

No. 2, 32-36	.03⅛	.03⅜
No. 3, 28-32	.03⅛	.03¼

CHICAGO (Based on Group 3)—

No. 1 prime white, 38-42	.03¼	.03½
No. 1 straw, 38-40	.03⅛	.03¼
No. 2 straw, 32-36	.02⅞	.03
No. 2 dark, 32-36	.02⅝	.03
No 3, zero to 15, 28-32	.02⅜	.02⅞
No. 3, 15 and above, 28-32	.02⅜	.02½

NEW YORK (Bayonne, N. J.)—

*No. 1	.04⅝	.04⅞
*No. 2		.04¼
*No. 4		.03⅝

*Barge deliveries one-eighth to one-fourth cent under above, tankcar price.

Gas Oil and Fuel Oil

(Gas oil per gal., fuel oil per bbl.)

OKLAHOMA (Group 3)—

U.G.I. gas oil	.02½	.02⅝
No. 4, 24-28, low cold test	.95	1.05
No. 4, 15 and above, 24-28	.80	.85
No. 5, low cold test	.72½	.80
Below 18 fuel oil, industrial	.70	.75

NORTH TEXAS—

U.G.I. gas oil	.02⅜	.02½
No. 4, 24-28, low cold test	.95	1.00
No. 5, low cold test	.72½	.80
Below 18 fuel oil, industrial	.65	.75

NORTH LOUISIANA (Ark., N. La. and Miss. delivery)—

U.G.I. gas oil	.02⅝	.02¾
10-14 fuel oil, industrial	.70	.75

ARKANSAS (Ark., N. La., Miss. del.)—

10-14 fuel oil, industrial	.60	.65

CHICAGO (Based on Group 3)—

U.G.I. gas oil	.02⅜	.02½
No. 4, 24-28	.95	1.00
No. 4, 15 and above, 24-28	.77½	.82½
No. 5, 18-22	.72½	.75
No. 6, 10-16	.62½	.67½

PENNSYLVANIA (inland refineries)—

36-40	.04½	.04⅝

CALIFORNIA—

Los Angeles:		
30-34 gas oil, per bbl.	1.00	1.20
24 plus diesel	1.00	1.25
24 plus diesel (bunkers)	1.10	1.30
12-16 (bunkers at tidewater)	.85	.95
10-16 (cargo lots)	.80	.95
12-17 (tankcars)	.70	.95
San Joaquin Valley:		
10-18 (tankcars)	.65	.75
San Francisco:		
24 plus diesel, per bbl.	1.30	1.35
24 plus diesel (bunkers)		1.35
10-16 (bunkers)		1.00

GULF COAST—

28-30 gas oil	.03¼	.03⅜
28-30 diesel (bunkers)		1.50
Bunkers (bulk cargoes)		.90
Bunker C (bunkers)		.90

NEW YORK (Bayonne, N. J.)—

27 plus, gas oil	.04½
28-30 diesel (lighterage 6¾ plus per bbl.)	1.65
28-30 diesel (tankers)	.04½
*Bunker C (to ocean-going ships in N. Y. harbor)	1.05
Industrial fuel (tankcars)	.03¾

*Lighterage charge 5c bbl. additional.

Bright and Steam-Refined

OKLAHOMA (Group 3)—

Bright Stocks:	
190-200 D, 15-25	.21½
150-160 D, 0-10	.18½
150-160 D, 15-25	.18
150-160 E, 15-25	.17½
100-110 D, 0-10	.17
Steam refined:	
631 green (treated)	.14
600 dark green (untreated)	.06 .07½

PENNSYLVANIA—

Bright Stocks (Pennsylvania grade No. 8 color, 145-50 at 510; 540-550 flash):	
10 pour test	.24½ .25
15 pour test	.23½ .24
20 pour test	.22½ .23
25 pour test	.21½ .22
Steam refined:	
600	.13½ .14
650	.14½ .15
600 Pennsylvania flash	.15½ .16
630 flash	.17½ .18
600 Warren E filtered	.15½ .16

Neutral Oil

(Vis. at 100° F. except Pennsylvania and color N.G.A.)

OKLAHOMA (Group 3)—

Zero to 10 Cold Test:	
150-3	.10
150-3	.11¼
180-4	.10⅝
200-3	.11⅝
200-4	.11¼
250-3	.13⅝
250-4	.13¼
280-3	.14⅝
280-4	.14¼
300-3½	.15¼
400-3½	.16
100-2 paraffin oil	.05⅝
15-20 Cold Test:	
200-3	.10⅝
200-4	.10¼
240-3	.12⅝
240-4	.12¼
280-3	.13⅝
280-4	.12⅝

GULF COAST—

Pale Oils:		
200-3	.06½	.07
300-3	.07	.07½
500-3½	.08	.08½
750-3½	.08½	.09
1,200-3½	.09	.09¼
2,000-4	.09¼	.09½
Red Oils:		
200-5-6	.06½	.06⅝
300-5-6	.06¼	.07
500-5-6	.07½	.08
750	.08	.08½
1,200-5-6	.08½	.09

CALIFORNIA (moving to dom. market)

Pale Oils:		
100-2½-3		.06
200-2½-3		.06¼
300-3-3½		.06½
400-3-4	.08½	.09¼
450-3-4	.09¾	.10
550-3-4	.10	.10¼
600-3-4	.10¼	.10½
Red Oils:		
200-4-5		.06
300-5-6		.06¼
350-5-6	.07	.08
400-5-6	.08	.08¼
450-5-6	.08¼	.08½
500-5-6	.08½	.09
600-5-6½	.09	.09⅜
700-6½ plus	.09¾	.10
750-6½ plus	.10	.10¼
900-6½ plus	.10¼	.10⅜

PENNSYLVANIA—

150 vis. at 750° F., color, 400-405 flash:		
Zero pour test	.20	.20⅛
10 pour test	.19	.19⅛
15 pour test	.18⅛	.19
25 pour test	.17⅛	.18
180 vis. at 70° F., 3 color:		
25 pour test	.20	.20½
200 vis. at 70° F., 3 color:		
Zero pour test	.23½	.24
10 pour test	.22½	.23
15 pour test	.22	.22½
25 pour test	.21	.21½

Wax and Petrolatum

(Prices per pound)

OKLAHOMA (Group 3)—

124-126 (a.m.p.) w.c. scale	.02⅜

PENNSYLVANIA (inland refineries)—

122-124 (a.m.p.) w.c. scale	.0235	.0240
124-126 (a.m.p.) w.c. scale	.0240	.0245

NEW YORK—

Wax in bags fully refined:		
123-125 (a.m.p.) wax		.0445
125-127 (a.m.p.) wax		.0455
128-130 (a.m.p.) wax		.0480
130-132 (a.m.p.) wax		.0505
133-135 (a.m.p.) wax		.0535
135-137 (a.m.p.) wax		.0560
124-126 (a.m.p.) w.s.	.0240	.0250
124-126 (a.m.p.) y.s.	.0240	.0245
Petrolatum in barrels, carload lots:		
Dark green		.01⅞
Amber	.02⅞	.03
Extra amber	.03	.03⅛
Lily white	.06⅝	.06¾
Snow white	.07¾	.07⅞
Cream	.05⅝	.05¾

Export Prices

GASOLINE

GULF COAST—

U. S. Motor		.05¼
60-62 400		.05⅜
61-63 390	.05⅝	.05½
64-66 375		.05½

LOS ANGELES—

U. S. Motor grades:		
53-55 octane		.04½
55-56 octane	.04½	.04¾
65-67 octane	.04¾	.05
67-69 octane	.05	.05¼
Above 69 octane	.05¼	.05½
65 and above 400 e.p.	.05½	.06

KEROSENE

GULF COAST—

41-43 prime white		.03
41-43 water white		.03⅛
44 water white		.03⅜

LOS ANGELES—

41-43 water white	.04½	.05¼

LUBRICANTS

(Pennsylvania Grade)

NEW YORK (f.a.s. in bbls.)—

Cylinder Stocks:		
600 Warren E	.22	.22½
600 S.R. unfiltered	.20	.20½
650 S.R. unfiltered	.21	.21½
600 flash S.R.	.22	.22½
630 flash S.R.	.24	.24½
Bright Stocks:		
8 color	.28	.28½
6½ plus color in dilution	.27	.27½

NEUTRAL OIL

200-3 color	.27½
150-3 color	.24

PARAFFIN WAX

NEW YORK (prices per pound)—

122-125 a.m.p.		.04125
125-127 a.m.p.		.0425
128-130 a.m.p.		.0450
133-135 a.m.p.		.0525
135-137 a.m.p.		.0550
Crude scale:		
124-126 w.s.	.0260	.0270
124-126 y.s.	.0240	.0245

CRUDE OIL PRICES

Oklahoma, Kansas, North Central and East Central Texas

(January 9, 1936)

East Texas*	$1.15
Van, Tex.†	1.02
Altus and Tipton, Okla.‡	1.08
Other fields (see gravity table).	

*All companies. †Pure Oil Co. ‡Gypsy Oil Co.

West Texas

Crane, Upton, Howard, Glasscock and Mitchell Counties	$ .80
Winkler County	.85
Lea County, N. Mex.	.85
Pecos County*	.85
Pecos shallow†	.75

*Shell Petroleum Co., Gulf Pipe Line Co. and Humble Oil & Refining Co. †Shell Petroleum Corp.

Note—For Humble, Magnolia and Texas Co.'s West Texas and Lea County prices see gravity table. Above prices are those of other buyers.

Rocky Mountain States

(Effective January 9, 1936)

Iles, Colo., light*	$1.06
Iles, Colo., heavy*	1.00
Greybull, Wyo.*	1.28
Torchlight, Wyo.*	1.28
Grass Creek, Wyo., light*†	1.28
Grass Creek, Wyo., heavy*†	.72
Hamilton Dome, Wyo.*	.67
Elk Basin, Wyo., light*†	1.28
Frannie, Wyo., heavy*	.72
Frannie, Wyo., light (Feb. 24, 1936)*	.78
Hogback, N. Mex.*	1.31
Pondera, Mont. (Jan. 29, 1936)*	1.05
Salt Creek, Dutton Creek and Midway, Wyo., take Stanolind's Oklahoma prices on a gravity basis.	
Big Muddy, Wyo.†	1.11
Rock Creek, Wyo.†	1.12
Artesia, N. Mex. (Dec. 1, 1923)‡	.75
Maljamar, N. Mex. (Sept. 29, 1933)‡	.75
Fort Collins and Wellington, Colo. (Jan. 9, 1936)‡	See Note
Florence, Colo.	.98
Lance Creek, Wyo.	.85
Lost Soldier, Wyo. (Sept. 30, 1933)	.88
Hudson, Wyo. (June 2, 1931)	.65
Sunburst, Mont. (June 5, 1936)	1.15
Cat Creek, Mont.	1.28
Cut Bank, Mont.	1.35

*Stanolind Oil & Gas Co. †Ohio Oil Co. ‡Continental Oil Co.

Note—Fort Collins and Wellington are not posted, price 5 cents under quotation of Salt Creek crude of like gravity (Fort Collins 36°; Wellington 33°). *Stanolind Oil & Gas Co. †Ohio Oil Co. ‡Continental Oil Co. Cut Bank by Toronto Pipe Line Co.

Southwest Texas

(January 9, 1936)

Saxet	$ .90
Mirando	.85
Pettus	1.25
Salt Flat*	.97
Salt Flat‡	.97
Darst Creek*	.97
Darst Creek†	.97
Luling	.90
Lytton Springs	1.00
Duval County	.85

*Humble Oil & Refining Co. †Magnolia Petroleum Co., Gulf Pipe Line Co. and Texas Co. ‡Shell Petroleum Corp. Saxet posted by Humble and Texas; Mirando by Humble and Magnolia; Pettus by Humble; Salt Flat by Humble; Luling and Lytton Springs by Magnolia; Duval by Texas Co.

Middle Western States

OHIO OIL CO.

Lima (Jan. 10, 1936)	$1.25
Illinois (Jan. 9, 1936)	1.23
Princeton, Ind. (Jan. 9, 1936)	1.23
Midland, Mich. (June 15, 1936)*	1.42
Midland, Mich. (June 15, 1936)†	1.42
West Branch, Mich. (June 15, 1936)	1.36
Muskegon, Mich.	1.00
Eastern Kentucky:	
Big Sandy River (Jan. 9, 1936)	1.30
Kentucky River (Jan. 9, 1936)	1.38
Western Kentucky (Jan. 9, 1936)	1.28

*Posted by Pure Oil Co. and includes Greendale, Porter, Beaverton and Crystal crudes. West Branch, Mich., by Simrall Corp. Eastern Kentucky crude purchased by Ashland Refining Co., Ashland, Ky. Oceana posted by Old Dutch Refining Co. and Naph-Sol Refining Co. †Simrall Corp.

Gulf Coast

(January 9, 1936)

Cleveland, Tex.	$1.10
Hardin, Tex.	1.03
Greta, Tex.	.90
Refugio, Tex., heavy	.90
Tomball, Tex.	1.30
LaFitte, La.	1.12
Livingston, Tex.	1.15
Bosco, La. (Jan. 16, 1936)	1.05
Evangeline, La.	1.07
Welsh, La.	.96

Cleveland and Hardin by Magnolia; Greta by Texas Co.; Refugio by Humble; Tomball by Humble and Magnolia; LaFitte by Texas Co.; Bosco by Pure; Evangeline and Welsh by Stanolind Oil & Gas Co.; Livingston by Shell Petroleum Corp.

North Louisiana and Arkansas

Smackover, all grades (Jan. 10, 1936)*	$.75
Smackover, all grades (Jan. 9, 1936)†	.80
Tullos and Urania (Jan. 10, 1936)	.97
Nevada, Ark. (Jan. 10, 1936)	.65
El Dorado East Field (Jan. 16, 1936)	.75
Converse, Holly, Pleasant Hill and Zwolle (Jan. 10, 1936)*	1.10
Lisbon, Ark. (Jan. 10, 1936)*	1.10
Elm Grove, La. (Jan. 10, 1936)	.80

*Standard Oil Co. of Louisiana, Gulf Refining Co., Louisiana Oil Refining Co., Texas Co. (effective January 14) and Magnolia Petroleum Co. (effective January 16).

Urania by H. L. Hunt Co. and Louisiana Oil Refining Co. Nevada by Standard of Louisiana, El Dorado East field by Magnolia Petroleum Co. Phillips Petroleum Co. (effective January 17), posts 75 cents for all grades in Union and Ouachita Counties, Arkansas.

Easern States

TIDE WATER PIPE CO.
(Effective Jan. 13, 1936)

Bradford, Pa.	$2.45
Allegany, N. Y.	2.45

SOUTH PENN OIL CO.
(Effective Jan. 13, 1936)

Pennsylvania Grade Oil in National Transit Lines (Bradford field)	2.45
Pennsylvania Grade Oil in Southwest Pennsylvania Lines	2.17
Pennsylvania Grade Oil in Eureka Pipe Line lines	2.12
Pennsylvania Grade Oil in Buckeye Pipe Line lines	1.97
Corning Grade Oil in Buckeye Pipe Line Co.'s lines	1.42

PENNZOIL CO.
(Effective Jan. 13, 1936)

Pennsylvania Grade Oil in National Transit Lines:	
Group A — Includes Cochran, Franklin, Hamilton and Doolittle districts.	2.42
Group B — Includes Titusville district.	2.41
Group C — Includes Turkey and Tidioute districts.	2.40
Group D — Includes Bear Creek and Porkey districts.	2.39
Group E — Includes Eideneau, Bull Creek, Rough Run, Carbon, Dipner, Bredlin, McJunkin, Jameson, Kenerdell, Emlenton, Tiona, Lacey and Kinzua districts.	2.36

Price depends on lengths of pipe line haul to plant at Oil City.

PURE OIL CO.
(Effective Jan. 13, 1936)

Cabin Creek, W. Va.	$2.12
Bradford Hollow, W. Va.	2.12
Kelly Creek, W. Va.	2.12

Canada

Ontario (Sept. 9, 1933):	
Petrolia*	$2.10
Oil Springs	2.17
Turner Valley (Feb. 3, 1936):†	
Clean naphtha	2.70
Discolored naphtha	2.46
Crude oil, 50 gravity	2.32
Crude oil, 45 to 49.9	2.12
Crude oil, 40 to 44.9	1.95

*Imperial Oil, Ltd. †Imperial Oil, Ltd., and Regal Oil & Refining Co.

Mexico

Panuco*	$ .74

*F.o.b. ship, based on April transactions and exclusive of production and export taxes and bar dues.

Crude Prices by Gravities

Gravity—	Oklahoma, Kansas, and Salt Creek, Wyo.	Central and North Texas	East Central Texas	North Louisiana, Arkansas	Gray County, Texas	Carson and Hutchinson Counties, Texas	Conroe, Texas	West Texas and Lea County, New Mexico	Gulf Coast, Texas and Louisiana	Anahuac and Dickinson, Texas	Iowa and Cameron Meadows, Texas
Below 20	....	....	....	....	....	....	....	....	$ .92	....	$ .82
20-20.9	....	....	....	....	....	....	....	....	.94	....	.84
21-21.9	....	....	....	....	....	....	....	....	.96	....	.86
22-22.9	....	....	....	....	....	....	....	....	.98	....	.88
23-23.9	....	....	....	....	....	....	....	....	1.00	....	.90
24-24.9	....	....	....	....	....	....	....	....	1.02	....	.92
Below 25	$.86	....	....	$.78	....	....	....	....	....	....	....
25-25.9	.88	....	....	.80	....	....	....	....	1.04	....	.94
26-26.9	.90	....	....	.82	....	....	....	....	1.06	....	.96
27-27.9	.92	....	....	.84	....	....	....	....	1.08	....	.98
28-28.9	.94	....	....	.86	....	....	....	....	1.10	....	1.00
Below 29	.94	$.84	$.91	....	....	....	....	$.75	....	....	....
29-29.9	.96	.86	.93	.88	....	....	....	.76	1.12	....	1.02
30-30.9	.98	.88	.95	.90	....	....	....	.78	1.14	$1.04	1.04
31-31.9	1.00	.90	.97	.92	....	....	....	.80	1.16	1.06	1.06
32-32.9	1.02	.92	.99	.94	....	....	....	.82	1.18	1.08	1.08
33-33.9	1.04	.94	1.01	.96	....	....	....	.84	1.20	1.10	1.10
34-34.9	1.06	.96	1.03	.98	....	....	....	.86	1.22	1.12	1.12
Below 35	....	....	....	....	$.86	$.81	....	....	....	....	....
35-35.9	1.08	.98	1.05	1.00	.88	.83	$1.24	.88	1.22	1.14	1.12
36-36.9	1.10	1.00	1.07	1.02	.90	.85	1.26	.90	1.22	1.16	1.12
37-37.9	1.12	1.02	1.09	1.04	.92	.87	1.28	.90	1.22	1.18	1.12
38-38.9	1.14	1.04	1.11	1.06	.94	.89	1.30	.90	1.22	1.20	1.12
39-39.9	1.16	1.06	1.13	1.08	.96	.91	1.32	.90	1.22	1.22	1.12
40 and over	1.18	1.08	1.15	1.10	.98	.93	1.34	.90	1.22	1.24	1.12

Magnolia Petroleum Co. in the East Central Texas field pays 7 cents per barrel less than above posted prices in that field.

Capt. J. F. Lucey and Mrs. Matney Dyer Munger, both of Dallas, Tex., were united in marriage in Texarkana, Tex., on June 20, but the announcement was not made of the event until the happy pair were well on their honeymoon trip. They will tour Europe before taking up their residence in Dallas.

STANDARD OIL CO. OF CALIFORNIA AND UNION OIL CO.

Crude oil prices at the well effective June 22, 1936

Gravity—	Signal Hill (Long Beach)	Seal Beach	Alamitos Heights	Huntington Beach	Inglewood	Playa del Rey	Olinda-Brea Canyon	Athens-Rosecrans	Dominguez	Elwood Terrace	Torrance	Richfield	Whittier E.Coyote (La Habra)	Montebello	W. Coyote Hills	Santa Fe Springs	Mountain View	Elk Hills Buena Vista Hills Midway-Sunset	Lakeview Area	Lost Hills	Coalinga	Wheeler Ridge	Kettleman Hills	Santa Paula*	Orcutt*
14-14.9	$.80	$.79	$.74	$.78	$.79	$.80	$.76	....	....	....	$.80	$.76	$.76	$.77	$.78	....	....	$.70	$.65	$.70	$.70	....	....	$.70	....
15-15.9	.80	.79	.74	.78	.79	.80	.76	....	....	....	.80	.76	.76	.77	.78	....	....	.70	.65	.70	.70	....	....	.70	....
16-16.9	.80	.79	.74	.78	.79	.80	.76	....	....	....	.80	.76	.76	.77	.78	....	....	.70	.65	.70	.70	....	....	.70	.70
17-17.9	.80	.79	.74	.78	.81	.80	.76	....	....	....	.80	.76	.76	.77	.78	....	....	.70	.65	.70	.70	....	....	.71	.70
18-18.9	.80	.79	.74	.78	.84	.80	.78	....	....	....	.82	.76	.76	.77	.78	....	....	.70	.65	.70	.70	....	....	.73	.72
19-19.9	.82	.79	.74	.82	.87	.84	.81	....	....	....	.85	.76	.78	.77	.78	....	$.70	.74	.66	.74	.71	$.70	....	.75	.74
20-20.9	.85	.79	.74	.85	.90	.88	.84	....	....	....	.88	.78	.82	.77	.80	....	.70	.78	.68	.78	.72	.70	....	.77	.77
21-21.9	.88	.79	.74	.89	.93	.93	.88	....	....	....	.91	.80	.85	.77	.84	$.78	.73	.82	.71	.82	.74	.70	....	.79	.80
22-22.9	.92	.82	.74	.92	.96	.98	.92	....	....	....	.93	.84	.89	.79	.88	.78	.77	.87	.74	.86	.78	.72	....	.82	.83
23-23.9	.95	.86	.77	.96	.99	1.02	.96	$.84	$.79	....	.96	.88	.93	.82	.92	.78	.80	.92	.77	.90	.82	.76	....	.85	.86
24-24.9	.99	.91	.80	1.00	1.02	1.06	.99	.88	.81	....	.99	.91	.96	.85	.96	.82	.84	.97	.80	.94	.86	.79	....	.87	.88
25-25.9	1.03	.95	.82	1.03	1.05	1.11	1.03	.93	.83	....	1.02	.95	....	.89	.99	.86	.88	1.01	.83	.98	.90	.83	....	.90	.91
26-26.9	1.06	1.00	.85	1.07	1.09	1.16	1.06	.98	.86	....	1.05	.98	....	.92	1.03	.90	.91	1.06	.86	1.02	....	....	....	.92	.93
27-27.9	1.10	1.06	.88	1.11	1.12	....	1.10	1.03	.88	....	....	1.02	....	.96	1.06	.95	.95	1.10	.88	1.06	....	....	....	.95	....
28-28.9	1.14	1.10	.90	1.14	1.16	....	1.14	1.07	.90	....	....	1.06	....	.99	1.10	.99	.99	1.15	.91	1.10	....	....	....	.97	....
29-29.9	1.17	1.15	.93	1.18	1.18	F.O.B.	1.17	1.12	.93	....	....	1.09	....	1.03	1.14	1.03	1.02	1.20	.94	1.14	....	....	....	.99	....
30-30.9	1.21	1.19	.95	1.22	1.21	our	1.21	1.17	.95	F.O.B.	....	....	....	1.07	1.17	1.08	1.06	1.25	.97	1.18	....	....	....	1.01	....
31-31.9	....	....	....	....	1.24	Pipe	1.24	1.22	.97	Ship	....	....	....	1.11	1.21	1.12	1.09	1.29	.99	....	....	....	....	....	....
32-32.9	....	....	....	....	1.27	Line	1.27	1.27	1.00	....	....	....	....	1.14	1.25	1.16	1.13	1.34	1.02	....	....	....	....	....	....
33-33.9	....	....	....	....	....	....	....	1.32	....	$1.28	....	....	....	1.18	1.28	1.20	1.17	1.38	1.04	....	....	....	$1.19	....	....
34-34.9	....	....	....	....	....	....	....	1.37	....	1.32	....	....	....	1 22	1.32	1.25	1.20	....	....	....	....	....	1.23	....	....
35-35.9	....	....	....	....	....	....	....	1.42	....	1.35	....	....	....	1.25	....	1.29	....	....	....	....	....	....	1.27	....	....
36-36.9	....	....	....	....	....	....	....	1.46	....	1.39	....	....	....	1.29	....	1.33	....	....	....	....	....	....	1.31	....	....
37-37.9	....	....	....	....	....	....	....	1.51	....	1.43	....	....	....	1.32	....	1.37	....	....	....	....	....	....	1.35	....	....
38-38.9	....	....	....	....	....	....	....	1.56	....	....	....	....	....	1.36	....	1.42	....	....	....	....	....	....	1.39	....	....
39-39.9	....	....	....	....	....	....	....	1.61	....	....	....	....	....	1.40	....	....	....	....	....	....	....	....	1.43	....	....
40-40.9	....	....	....	....	....	....	....	1.66	....	....	....	....	....	1.43	....	....	....	....	....	....	....	....	....	....	....

Newhall, McKittrick, Kern River, Kern Front and Round Mountain, 70 cents for all grades. Santa Paula and Orcutt posted by Union Oil Co. Same company's Brea Canyon schedule stops at $1.14 for 28 degrees and over, and Belridge and Lost Hills schedule stops at $1.32 for 37 degrees and over.

MARKET RECORD, ACTIVE OIL STOCKS

Compiled by Carl H. Pforzheimer & Co., 25 Broad Street, New York City, Members New York Stock Exchange and New York Curb Exchange

New York Stock Exchange

1936 High	1936 Low	Week ended June 27 Sales	Week ended June 27 High	Week ended June 27 Low	Week ended June 27 Close	Stocks—	Total shares outstanding	Par value	Dividend rate	Payable or last paid	Dividends paid in 1935	1935 High	1935 Low	1934 High	1934 Low
125½	75	2,500	99	95¾	99	Amerada Corp.	788,675	N.P.	50cQ	4-30-36	$2.00	80	48½	55⅝	39
35⅝	26⅝	11,800	29½	28¼	29¼	Atlantic Refining	2,664,904	$25	25cQ	6-15-36	1.00	28	20½	35¼	21½
20	14⅛	17,900	17	15⅞	16½	Barnsdall Corp.	2,131,090	$5	20cQ	8-1-36	‡.20	14¾	5⅞	10	5⅞
21⅝	14	39,800	20¼	19⅛	19½	Columbia Gas & Elec.	11,610,036	N.P.	20c	5-15-36	.20	15¾	3⅜	19¼	6⅝
15¼	11½	81,200	13½	11¾	13¼	Consolidated Oil Corp.	13,983,287	N.P.	15cQ	8-15-36	.25	12¼	6½	14¼	7¼
38½	28⅛	17,100	31¾	29⅞	31⅜	Continental Oil of Delaware	4,682,671	$5	25c	7-31-36	.62½	35	15⅛	22⅜	15¾
34¾	22	2,500	25¾	24	24	General Asphalt	387,149	$10	25c	12-17-35	.25	22½	11¾	23½	12
12¼	6⅜	16,300	9⅜	8¼	8¾	Houston Oil (new)	1,098,618	$25	....	10-17-30	....	7	1½	5⅝	2½
23	17¼	17,300	21¼	19½	21⅛	Mid-Continent Petroleum	1,843,872	$10	40cSA	6-1-36	.40	20½	9½	14¾	9⅛
26¼	16¾	1,400	18⅛	17½	17⅞	Mission Corporation	1,399,345	N.P.	....	.....	....	17¾	10⅜	..	..
47½	19⅞	14,500	47½	42	46	National Supply of Delaware	382,591	$25	....	5-15-31	....	20⅞	9	21⅛	10
17½	12½	12,100	13⅜	12⅞	13⅛	Ohio Oil Co.	6,563,377	N.P.	25cSA	6-15-36	.30	14¼	9¼	15⅞	8½
18	11¾	2,000	13⅞	12½	13½	Pacific Western Oil	1,000,000	N.P.	40c	11-30-34	.25	14	6¾	9⅜	5½
4¼	1⅜	400	2½	2½	2½	Panhandle P. & R.	198,770	N.P.	....	.....	....	1⅞	½	2½	⅝
49⅜	38⅛	23,200	43¾	40½	42½	Phillips Petroleum	4,152,836	N.P.	50cQ¶	6-1-36	1.25	40	13¾	20¾	13⅜
16½	11⅞	4,600	14½	14	14	Plymouth Oil Co.	1,050,000	$5	25c	6-30-36	.25	13	6½	16¾	7¼
24⅞	16¼	50,400	19¼	18⅛	18½	Pure Oil Co.	3,038,370	N.P.	....	9-1-30	....	17	5⅞	14⅞	6⅛
43⅝	30¾	5,300	34	31½	32¼	Seaboard Oil of Delaware	1,244,283	N.P.	25cQ	6-15-36	1.00	36⅞	20¾	38⅜	20¾
19¼	14¾	7,100	17	16½	16½	Shell Union Oil	13,070,625	N.P.	....	6-30-30	....	16½	5½	11½	6
120⅛	110½	1,900	119¾	119	119¼	Shell Union Oil pfd.	400,000	$100	....	7-1-31	....	111	63⅛	89	57
6¾	4⅝	1,000	4⅞	4¾	4¾	Simms Petroleum	461,698	$10	1.00 liq.	1-27-36	11.75 liq.	18¾	4¾	17⅛	7¼
31½	19½	1,900	24⅞	24¼	24½	Skelly Oil	1,008,514	$15	....	12-15-30	....	20½	6½	11½	6
17	12½	54,300	13¼	12¾	13¼	Socony-Vacuum	31,151,075	$15	20cSA	3-16-36	.30	15¾	10⅝	19⅞	12½
47⅝	35⅜	14,000	38	37⅛	37½	Standard Oil of California	13,014,754	N.P.	25cQ†	6-15-36	1.00	41⅛	27¾	42⅞	26½
40⅛	32¾	12,000	34¾	33⅝	34⅜	Standard Oil (Indiana)	15,215,677	$25	25cQ†	6-15-36	1.00	33⅜	23	32¾	23¼
30	25	No sales ..	..	..	..	Standard Oil of Kansas	200,000	$10	50cQ	10-31-34	....	32	20	41	26
70	51⅛	42,900	61¼	58⅝	60	Standard Oil of New Jersey	25,856,081	$25	75cSA¶	6-15-36	‖1.25	52⅜	35¾	50⅛	39¼
91	72	400	78½	78	78⅛	Sun Oil	1,733,013	N.P.	25cQ	6-15-36	$1 & 7% Stk.	77	60½	74¼	51½
39½	28⅞	39,700	36¼	33¼	36	Texas Corp.	9,340,069	$25	25cQ	7-1-36	1.00	30¼	16½	29⅜	19⅝
15¼	7½	17,400	11⅞	10½	10⅜	Texas Pacific Coal & Oil	880,703	$10	25c	8-1-36	....	9¼	3¼	6½	2½
19⅛	14¾	8,200	15¾	15	15	Tide Water Associated	5,642,342	N.P.	15cQ	6-1-36	....	15⅞	7⅝	14⅜	8
106½	100⅝	1,000	105⅛	104⅜	105⅛	Tide Water Associated pfd.	626,221	$100	$1.50Q	4-1-36	$6.50	104½	84	87	64½
28½	20⅞	8,300	22⅜	21⅞	22⅛	Union Oil of California	4,386,070	$25	25cQ	5-9-36	1.00	24	14¾	20½	11½
31⅝	22⅝	1,400	25¾	24¾	24¾	Union Tank Car Co.	1,200,000	N.P.	30cQ	6-1-36	1.20	26½	20⅞	25¾	15⅝
5¼	2¾	2,000	4⅛	3¾	4	Wilcox Oil & Gas	424,839	$5	....	5-10-28	....	3⅛	1	5¾	2

*Ex-dividend. †Plus extras. ‡Also 50 per cent in stock of Barnsdall Ref. §Partly on account of accumulation. ‖Dividend 4/75 Mission Corp. paid 3-15-35. ¶Includes extras.

New York Curb

1936 High	1936 Low	Week ended June 27 Sales	Week ended June 27 High	Week ended June 27 Low	Week ended June 27 Close	Stocks—	Total shares outstanding	Par value	Dividend rate	Payable or last paid	Dividends paid in 1935	1935 High	1935 Low	1934 High	1934 Low
20¼	13¼	4,400	16⅛	15¼	15½	Bridgeport Machine Co.	150,000	N.P.	....	5-1-30	....	14⅛	3¾	3¾	½
50	39¾	150	41¾	40¼	41¾	Buckeye Pipe Line Co.	200,000	$50	75cQ	6-15-36	$3.00	42½	30½	38	26
4⅞	2½	3,100	3	2¾	2¾	Carib Syndicate	799,020	25c	....	.....	....	4¼	1⅝	5½	1½
124¾	105	50	116	116	116	Chesebrough Mfg. Co.	120,000	$25	$1.50Q	6-29-36	6.50	157	115	150	116
7⅜	3	83,700	5⅛	4½	4½	Cities Service	37,804,394	N.P.	....	6-1-32	....	3¼	¾	4¼	1¼
4	1⅛	29,900	2¼	1⅞	2⅛	Colon Oil	2,200,000	N.P.	....	.....	....	2⅛	½	3¼	½
4⅛	1½	3,600	2¼	1⅞	2	Cosden Oil	399,687	$1	....	.....	....	1½	¼	3⅞	½
34¾	19⅞	5,400	27⅞	26½	27¼	Creole Petroleum	6,974,356	$5	25c	7-15-36	.20	23¾	10	14⅜	9⅝
12	9	100	9½	9½	9½	Darby Petroleum	351,390	$5	25cSA	1-15-36	.50	8⅞	4	7½	4⅛
4⅜	1⅞	1,700	3¼	3	3⅛	Derby Oil & Refining	263,162	N.P.	....	.....	....	2	⅜	2¼	1
44	39	No sales ..	..	..	..	Eureka Pipe Line	50,000	$50	$1Q	5-1-36	4.00	38	33¼	37	30
98	72	5,900	86	80½	80½	Gulf Oil Corp.	4,538,101	$25	25c	7-1-36	....	74¾	50¼	76¾	49¾
76½	57	6,900	62¼	59⅞	61⅜	Humble Oil & Refining (new)	8,923,935	N.P.	25cQ	7-1-36	1.25	64	44	49½	33¼
24½	20	4,600	21⅝	21	21⅛	Imperial Oil of Canada	26,919,871	N.P.	62½cSA†‡	6-1-36	1.25	22½	15⅜	17⅞	12⅝
9¼	5½	200	7	7	7	Indiana Pipe Line	300,000	$10	20cSA	5-15-36	.35	6⅛	3⅝	6⅞	3⅝
39⅝	33½	3,600	36½	35½	36⅜	International Petroleum	14,247,088	N.P.	$1.25†‡	6-1-36	2.50	39¾	28	33⅜	19⅝
15⅜	9⅞	6,200	12½	11⅞	12	Louisiana Land & Exp.	3,000,000	N.P.	10cQ	3-16-36	.10	11⅜	4⅜	5	2⅛
15	7⅝	900	12	11½	12	Lion Oil Refining	270,000	N.P.	....	10-27-30	....	8⅛	3½	6	3⅜
14¼	9⅞	3,500	11	10⅝	10⅝	Lone Star Gas	5,382,723	N.P.	20cSA	8-15-36	.30	10⅞	4½	8⅜	4¼
8⅜	5	1,300	6¼	5¾	6	Mountain Producers	1,682,182	$10	30cSA	7-1-36	.90	5¾	4⅛	5½	4
23	17⅝	4,300	19½	18⅞	19	National Fuel Gas	3,810,183	N.P.	25cQ	7-15-36	1.25	20	11¾	18⅛	13⅛
15¾	9¼	400	10⅝	10⅜	10⅝	National Transit	509,000	$12.50	40cSA	6-15-36	.75	10⅝	6¾	9½	7
4½	2⅞	No sales ..	..	..	..	New Bradford O'l	1,445,202	$5	10cSA	5-15-36	.20	3¼	2	2½	1⅝
6⅝	1⅝	2,600	2⅞	2⅝	2¾	New Mexico and Arizona	1,000,000	$1	....	.....	....	2½	1	2¾	1
6¼	4½	100	5⅛	5⅛	5⅛	New York Transit	100,000	$5	15cSA	4-15-36	.30	4⅞	3	4¾	3
9¼	4⅞	200	5⅜	5¼	5¼	Northern Pipe Line	120,000	$10	15cSA	7-1-36	.50	8	5¼	7	4⅝
6⅝	3¼	12,200	6	5⅝	5⅜	Pantapec Oil	1,608,700	N.P.	....	.....	....	4⅜	1¼	2⅝	⅞
19¼	4½	13,200	15⅞	15⅛	15⅞	Root Petroleum Co.	336,045	$1	25c	8-1-36	....	5	1½	..	..
4¾	1⅞	100	3¼	3¼	3¼	Ryan Consolidated	296,931	N.P.	....	.....	....	2½	⅝	3⅜	⅞
10	7	800	7⅞	7⅝	7⅝	Salt Creek Producers	1,496,859	$10	40cSA	6-30-36	1.20	7½	5½	7⅞	5½
40½	32½	200	38	37⅝	38	South Penn Oil	1,200,000	$25	50c†	3-31-36	1.35	34½	21⅝	26½	17½
7⅞	3¼	100	4⅛	4⅛	4⅛	Southern Pipe Line	100,000	$10	15cSA	3-2-36	.30	5	3¼	5½	3½
60	54	No sales ..	..	..	..	Southwest Penna. Pipe Lines	35,000	$50	$10 spl.	7-1-36	5.00	56	44¼	47	41
23⅜	17⅛	1,700	18⅛	17⅝	17¾	Standard Oil of Kentucky	2,604,790	$10	25cQ	6-15-36	1.25	24	18	18⅜	14⅝
14⅝	11½	100	11⅛	11⅛	11⅛	Standard Oil of Nebraska	188,403	$25	....	6-20-34	....	12	7⅜	16⅞	8¼
36¼	21¾	1,200	29	27½	28	Standard Oil of Ohio	753,740	$25	25c	7-15-36	....	23⅝	11½	28½	12¼
5	2⅝	26,900	4¼	3⅞	4¼	Sunray Oil	1,610,810	$1	....	4-15-31	....	2⅞	⅞	2	††
9¾	6	300	6¼	6⅛	6¼	Texon Oil & Land	336,028	N.P.	15cQ	6-30-36	.60	6⅞	5	11	4⅜
7½	4⅜	5,600	5	4¾	4⅞	Texas Gulf Producing Co.	888,076	N.P.	....	12-29-34	....	4¾	2½	7	3⅜

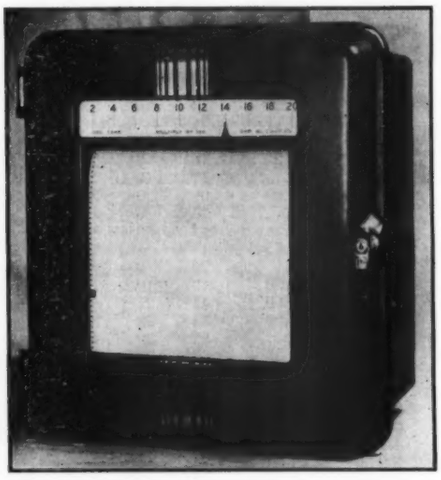
*Ex-dividend. †Includes extras. ‡Payable in Canadian funds.

Note.—In comparing highs and lows for the several years in the two tables, it will be necessary to take into consideration cases where there have been stock split-ups.

NEW OR IMPROVED EQUIPMENT

Micromax Combines Duties of Many Instruments in One

The "Silver Anniversary" Micromax recorder, latest and most serviceable of the long line of industrial recording machines, has been announced



by Leeds & Northrup Co., 4934 Stenton Avenue, Philadelphia, Pa. Marking the twenty-fifth year since the concern originated the recording potentiometer pyrometer, this Micromax not only provides in one instrument all combinations of indicating, recording, signaling and controlling, but provides them in unique ways. Measurements are presented conveniently. A bold scale and pointer show the condition at the moment, and a clear record on 10 visible inches of strip-chart shows it for the past several hours. On controllers, a second pointer shows control setting. Multipoint records may be in blue or in multicolor.

In this Micromax control and signal contacts operate undisturbed by air currents when the door is opened, even when the chart is changed or the pen refilled. The pen holds a seven-week ink supply. An ingenious double frame makes all parts of the mechanism accessible and enables the user to replace the chart without effect on other parts of the recorder. Standard Micromax assemblies are designed to assure reliability for the vital operations of measuring, detecting, balancing and control.

Bulletins, Booklets and Other Literature for the Trade

The June issue of the Reading Puddle Ball, published by the Reading Iron Co., Philadelphia, Pa., continues the "Story of Genuine Puddled Wrought Iron."

Catalog No. 50, obtainable from the National Tank Co., Tulsa, Okla., covers separators, separator valves and parts and miscellaneous accessories.

Beaver pipe-cutters, threading equipment and accessories are the subject of an eight-page bulletin mailed on request by Beaver Pipe Tools, Inc., Warren, Ohio.

The current number of the News Letter, published by Byron Jackson, Berkeley, Calif., is devoted to gear-driven deep-well turbine pumps.

Two bulletins of interest to refiners are ready for distribution by Oliver United Filters, Inc., 33 West Forty-second Street, New York. One, No. 405, is devoted to filters for dewaxing, contacting, general clarification, residuum and acid-handling. The other, No. 302, describes Olivite acid-handling pumps.

The June number of the Link-Belt News, published by the Link-Belt Co., 307 North Michigan Avenue, Chicago, presents interesting "News-in-Pictures," including a vibrating screen for conditioning rotary mud.

The Yale & Towne Manufacturing Co., Philadelphia, Pa., is sending on application a bulletin describing and illustrating the "Pul-lift," which is called "the tool of a thousand uses."

How a wire-rope bridge carried a pipe line across the Sabine River is told in the latest number of the Hercules Record, published by A. Leschen & Sons Rope Co., St. Louis, Mo.

A bulletin describing a new Cooper-Bessemer vertical pumping-engine is announced by the Cooper-Bessemer Corp., Mount Vernon, Ohio.

Men Widely Known in the Equipment Field

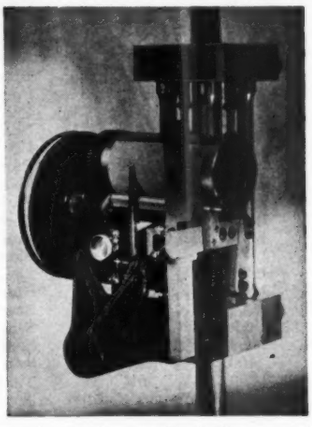
Guy A. Tompson, who joined the Taubman Supply Corp., Tulsa, as general manager in charge of sales January 1, 1936, has been advanced to vice president in charge of sales. For 18 years

GUY A. TOMPSON

prior to his service with the Taubman organization Mr. Tompson had been in the purchasing department of the Empire Companies, Bartlesville, Okla., for 12 years of that time having been purchasing agent. He has served as president of the Purchasing Agents Association of Tulsa and as vice president of district No. 2, which made him a member of the National Association of Purchasing Agents. Mr. Tompson, who was born in Missouri, taught school for six years in that state before joining the Empire Companies.

Graphic Record of Polish-Rod Load Is Made by Dynagraph

A polish-rod dynamometer known as the dynagraph, for graphically recording the instantaneous polish-rod loads, has been developed by the Westinghouse Electric & Manufacturing Co. This



instrument operates mechanically, is entirely self-contained, and is so light it may be handled by one man. There are no electrical or hydraulic parts. With polish-rods of standard grades of steel, the graphic record is said to be accurate within 2 per cent. The dynamometer may be used above or below the cross-arm of the reins.

The instrument usually is clamped onto the polish-rod below the reins. In this case the stretch of the polish-rod between the clamping points of the instrument is recorded on a chart which is rotated in proportion to the pumping stroke. The recording stylus is actuated by the polish-rod stretch, which is multiplied some 400 times. For example: a 10-000-pound load on a 1¼-inch rod gives a 1-inch movement of the recording stylus on the graphic record.

If there is not sufficient clearance to clamp the dynamometer below the reins, it may be clamped onto the polish-rod above the cross-arm of the reins. The instrument is then in compression between the cross-arm and the polish-rod clamp. The load is taken on four compression columns and the instrument records the strain in these columns.

Lincoln Appoints Denver Agent

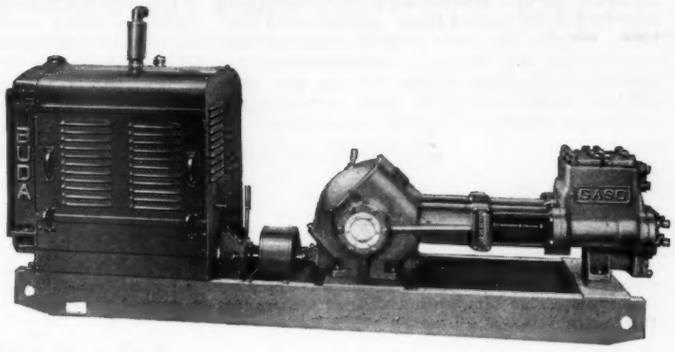
The Lincoln Electric Co., Cleveland, Ohio, manufacturer of "Shield Arc" welders, electrodes and "Linc-Weld" motors, has appointed the Intermountain Belting & Packing Co. as its agent in Denver, covering Colorado and parts of Kansas, Nebraska and Wyoming. The salesroom is located at 1414 Wazee Street. The president of the Intermountain Belting & Packing Co. is J. H. Johnson. M. H. Mickey is vice president and J. I. Creighton, secretary and treasurer. These men, assisted by Homer Glan and James Kelley, will provide the territory in and around Denver with Lincoln supply service for arc-welding needs. Various model "Shield Arc" welders and "Linc-Weld" motors will be on display and a stock of "Fleetweld" and the other Lincoln electrodes will be maintained.

Change in Bantam Officials

The Bantam Ball Bearing Co., South Bend, Ind., announces the retirement of Karl Herrmann as vice president and general manager. He is succeeded by A. H. Frauenthal, formerly assistant general manager. Mr. Frauenthal went to the Bantam organization in 1930. Mr. Herrmann's services are being retained as consulting engineer.

GASO PUMP ADAPTED FOR WIDE OIL-FIELD SERVICE

The Gaso Pump & Burner Manufacturing Co., 902 East First Street, Tulsa, specializing in oil-industry pumps, is ready to make deliveries on its new pumping unit, which can be furnished mounted on either skids or sturdy pneumatic-tired trailer, and with either internal-combustion engine or electric-motor drive. Drive is direct through a special flexible coupling. The unit is designed for general service such as water lines, oil gathering systems, booster-station service, or pick-up service. It is light in weight, yet of extra-sturdy construction to insure users long, trouble-free service in the field.



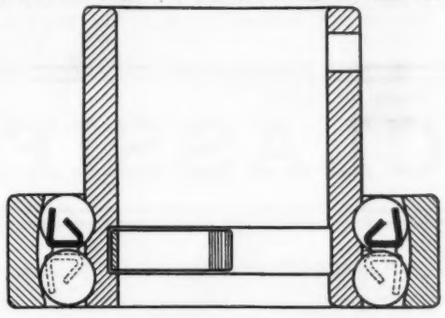
The pump is a duplex-piston, worm-driven enclosed-type power pump. Ring gear is of alloy-nickel bronze and is mounted at the center of an alloy-steel crankshaft. Worm is of chrome-nickel steel, hardened and ground. These driving parts operate in an oil bath in the enclosed crankcase and are mounted on Timken tapered roller bearings which are sealed off from the crankcase.

Pistons have cast-iron bodies and are regularly furnished with cast-iron snap piston rings, but any type piston rings may be specified. Figure 2244 has interchangeable liner type fluid end. Figure 2245 has inserted brass-tube liner. But these pumps can be furnished with special alloy-steel or bronze liners for specific services. Valves may be specified of Durabla stainless steel or of Monel metal with bronze seats. A valuable feature of design is the large fluid passages and valve openings, which permit proper filling at highest piston speeds without undue shock or loss of power due to excessive friction.

Grip-Lock Bearing Is Applied Quickly Without Any Tools

The S K F grip-lock bearing is the latest addition to the line of antifriction bearings, comprising more than 1,200 sizes and types of ball and roller bearings, developed by S K F Industries, Inc., Front Street and Erie Avenue, Philadelphia, Pa. The grip-lock principle offers the advantage of quick, simple application of the bearing without tools of any kind and insures the user of a bearing positively locked to the shaft.

Essentially the bearing is the regular S K F self-aligning extended inner-race bearing with an eccentric groove machined in the bore of the inner race. Fitted in the eccentric groove is a piece of spring steel known as the grip-lock shoe. When the shoe is in the deepest part of the eccentric groove the bearing may readily be slipped on the shaft. Then, by holding the inner race of the bearing while the shaft turns in the direction of operation, the knurling at the ends of the grip-lock shoe grips the shaft, causing the shoe to



wedge in the shallow part of the eccentric groove, thus securely locking the bearing on the shaft.

Designed to Prevent Mud and Sand from Causing Trouble

MacClatchie Manufacturing Co., Compton, Calif., has placed on the market its new Five-in-One blowout-preventer. This device operates on a principle that incorporates five preventers in one. Without any change in the packing assembly it will pack off any part of the string such as drill pipe, kelly, drill-collars, tool-joint, or pipe-collar. Hydraulic pressure is applied to the rams and in a few seconds any part of the drill-string is securely packed off to withstand 4,000 pounds bottom-hole pressure. According to the manufacturer this blowout-preventer has no moving parts where sand and mud can keep it from working satisfactorily.

Here and There With Men Who Manufacture Equipment

Earl C. Smith, chief metallurgist of Republic Steel Corp., Cleveland, Ohio, has announced the appointment of Muir L. Frey to the metallurgical staff with headquarters at the Republic plant in Buffalo, N. Y.

Tomlinson Steam Specialty Co., 1603 St. Clair Avenue, Cleveland, Ohio, has been appointed sales representative for the Edward Valve & Manufacturing Co., Inc., East Chicago, Ind.

"Monel Metal in Oil Refining" is the title of a 16-page booklet ready for mailing by the International Nickel Co., 67 Wall Street, New York.

Edward A. Livingstone has been appointed manager of alloy tube sales for the Babcock & Wilcox Tube Co., Beaver Falls, Pa.

George M. Snodgrass is now general sales manager of the Imperial Electric Co. of Akron, Ohio, manufacturer of electric motors and generators.

C. W. Cotton and O. G. Houser, operating as the C. W. Cotton Co., have opened sales offices in the National Bank of Tulsa Building. Genet Hare, who recently joined the organization, is office manager. The warehouse will be continued at 26 North Guthrie Avenue.

Sperry-Sun Branch Opened

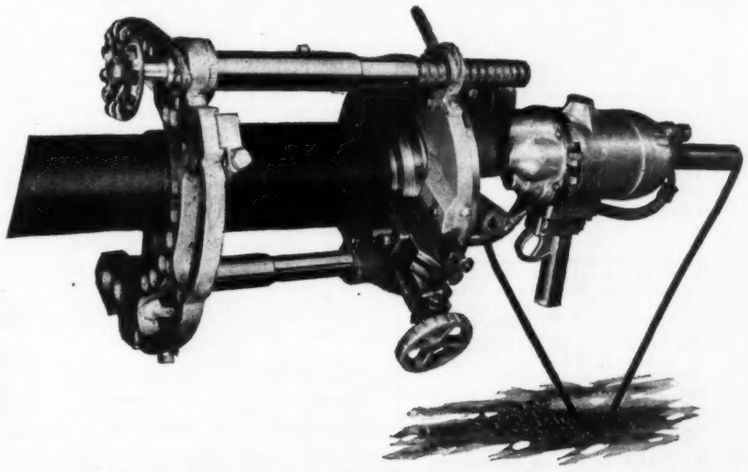
The Sperry-Sun Well Surveying Co., 1608 Walnut Street, Philadelphia, Pa., has opened a branch office at 316 West Anapamu Street, Santa Barbara, Calif., for the convenience of clients operating in fields on the West Coast and north of Los Angeles. The branch will carry H-K and Syfo Clinographs and provide Surwel (gyroscopic) service. The Bakersfield, Calif., branch has been discontinued, but A. F. McQuiston, 3314 Chester Avenue, Bakersfield, continues to represent the company. The main California office is at 549 East Bixby Road, Long Beach.

Single-Phase Induction Motor

Especially designed for heavy industrial duty, a new single-phase repulsion-start induction motor is announced by Westinghouse Electric & Manufacturing Co., East Pittsburgh, Pa. The new type CR motor has high starting and pull-in torques which make it particularly suitable for such applications as pumps, compressors, grease guns, etc. It is available in a complete line of ratings, three-quarters to 3 horsepower, 110/220 volts dual voltage for operation on all commercial frequencies.

MACHINE TAKES LEAKS OUT OF TOOL-JOINTS ON LEASE

The Portable Rotary Service Co., Box 516, Greggton, Tex., is introducing a portable machine for repairing and facing tool-joints on the lease. It is a concentrated, specialized portable facing unit, designed for the utmost accuracy. The milling machine works from a gauge or templet from which the cutting tool is set at an accurate predetermined distance, assuring gauge accuracy. The finest gauges obtainable for every size tool-joint are kept on hand for instant use. Among the advantages operators report are: (1) Makes tool-joints standard and interchangeable by taking the slack out of them. (2) Makes accurate efficient tool-joints out of those that otherwise would be thrown away. (3) Reduces backing off of tool-joints with attendant delays and fishing jobs. (4) Takes out leaks, thus minimizing the washing down of plaster of the wall of the hole with consequent caving-in and sticking of drillpipe resulting in long fishing jobs. (5) A good square seat is made on the bottom end of box for the elevators; a safety feature.



Taking out leaks speeds up drilling, for leaking pipe lessens the fluid pressure at the drilling-bit, resulting in cuttings not being carried away fast enough and the bit balling up.

Louisiana-Arkansas, Western Refiners Association Unite

Consolidation of the Western Petroleum Refiners Association and the Louisiana-Arkansas Refiners Association into one organization and the addition of new members in East and North Texas, was announced this week by A. V. Bourque, secretary-treasurer of the W.P.R.A., and L. C. Grosjean, secretary of the Louisiana-Arkansas Association. The consolidation will become effective July 1. The Louisiana-Arkansas group will maintain its identity and will function as the Ark-La-Tex division of the Western Petroleum Refiners Association. Activities of the consolidated organization will be directed and administered by the W.P.R.A. whose headquarters is in Tulsa. Mr. Bourque will continue as secretary-treasurer, while Mr. Grosjean will continue as secretary of the divisional office in Shreveport.

Including the fifteen companies which will be added through the consolidation, the membership of the Western Petroleum Refiners Association will total 70 refiners located in the Mid-West, Southwest and Southeast. About 60 members are independent, non-integrated refiners.

The consolidation will result in a unified plan of operation and will eliminate duplication of efforts by the two organizations whose activities have been along parallel lines. Arkansas and Louisiana refiners who have been members of both organizations will benefit by a reduction in administrative expenses. Texas refiners, who have not been members of either group, will gain the service and prestige of an older organization.

♦ ♦ ♦

OBITUARY

CHARLES H. COLEMAN, 63, resident of Ramona, Okla., since 1900 and an employe of the Sinclair Prairie Pipe Line Co. for several years, died Wednesday.

JOHN BLACK MILLER, 69, active in Pennsylvania oil industry for 30 years and president of the A. D. Miller Sons Co. refinery, died June 22 at his home in Pittsburgh, Pa. He was the son of Andrew D. Miller, one of the pioneer oil refiners of this country. He was in charge of the A. D. Miller Sons Co. plant in Nashville, Tenn., until its sale to the Standard Oil Co. of Kentucky. In 1906 Mr. Miller returned to Pittsburgh and continued his oil business there.

KENNETH MONCRIEF, 24, petroleum engineer with the Schlumberger Well Surveying Corp. at Beaumont, Tex., died Wednesday at a hospital at Woodsboro, Tex., from injuries suffered in an automobile accident.

A. M. (ART) WEAVER, 61, Tulsa, died Sunday night in Drumright, Okla., from effects of sunstroke. He was a cable tool contractor for about 40 years, starting in the Pennsylvania fields, where he was born. He moved to Kansas and Oklahoma in 1903.

ELLIS L. AYLING, 66, of Bartlesville, Okla., died Tuesday at a lease near Ochelata, Okla., following a brief illness. He has been connected with the oil industry 33 years.

CLASSIFIED ADVERTISING

Royalties—Production

VEGAS DOME ROYALTIES.—Good block for sale against New Mexico's great deep test well. Wm. H. Springer, Las Vegas. New Mexico.

Northwest Ector County, Texas, presents real opportunity to oil operators. New area just being opened. Prices now low but certain to advance due to three good wells just brought in flowing 400 to 700 bbls. 36 gravity oil from pay found around 4200 ft. Close In Drilling Blocks For Sale. Wire,
H. B. OPP, Burnet, Texas.

PRODUCING OIL ROYALTIES
15 years of experience.
L. H. WITWER
214 Kennedy Bldg., Tulsa, Okla.

Brokers—Salesmen

Sell in the most active area in the United States — The Permian Basin of West Texas and Southeastern New Mexico. From the standpoint of royalty investors this area has much to offer. Can supply you with choice non-producing royalties located on geophysical highs. Also drilling blocks, close in acreage to production, or wildcat leases. I maintain my own field men who cover this area for me. All offerings meet the requirements of the Securities and Exchange Commission. Inquiries invited.

B. D. BUCKLEY

Paul Brown Bldg., St. Louis, Mo.

NEW MEXICO Oil and Gas Leases and royalties. Send 50 cents in stamps for new State Oil Map of New Mexico. Roy G. Barton, Clovis, New Mexico.

PRODUCING OIL ROYALTIES
(ALL FIELDS)
Bought, Sold and Quoted.
HENRY L. BAKER CO.
715 Van Nuys Bldg.,
Los Angeles, Calif.
Telephone Trinity 7391

HIGH GRADE producing oil and gas royalties offered to dealers. Billie Smallwood. P. O. Box 2261, Tulsa, Oklahoma.

FOR SALE—Part of royalty in 80 acres, section 68, H.T.&B. survey, Brazoria Co., Texas. John Gartsee, 2817 Payne Road, Des Moines, Iowa.

Producing royalty Section 16-25, block B-3, private owner. J. P. Stouppas, 38 So. Watt Street, Youngstown, Ohio.

Royalties—Production

Van—East Texas—Louisiana Royalties
Bought—Sold.
WILLIAM MONROE LAYTON
40 Wall St., Suite 1437, New York City.

F. A. SANSOME
Mainstains a Complete Trading Organization for Brokers, Banks and Dealers
In
Oil Royalties.
522 Fifth Avenue, New York, N. Y.

I BUY AND SELL oil royalties and producing wells, East Texas field. B. A. SKIPPER, Longview, Texas.

ANDREW J. BARRETT
The Philtower
Tulsa, Oklahoma.

PRODUCING OIL ROYALTIES
for dealers.
H. P. BOWEN
842 Kennedy Bldg., Tulsa, Okla.

SHERIDAN and GOVE Cos., Kansas drlg. blks. Royalties, Leases, Low Prices. Mutual Oil Enterprise, Oakley, Kansas.

INVESTOR wants cheap royalties in Oklahoma 10 to 100 acres each. Address Box H-342, The Oil and Gas Journal, Tulsa, Oklahoma.

OKLAHOMA CITY AND FITTS
Royalties Quoted Dealers
W. E. COOK
Perrine Bldg., Oklahoma City, Okla.

LIQUIDATION Sale, Proved Oil and Gas field, light oil production 1,000 feet; right in geological trend for big Sundance sand wells found in Medicine Bow, Rock River, Lost Soldier. National rig and gas well for drilling. Price $17,500. Part cash. No royalty deal. Act quick if interested. Address Box 11, Riverton, Wyoming.

NEW MEXICO'S deep test well on Vegas Dome is under drill. Now is the time to get some select leases on structure. Under operation by
S. W. PRESSEY,
Pueblo, Colorado.

VAN POOL — EAST TEXAS
Bought — Sold — Wholesale.
W. R. Brown & Co., Inc.
14 Prospect Pl., East Orange, N. J.

NO MORE DRY WELLS—Try our effective prospecting system; send immediately a printed plan of township and detailed plan of property where you are working. A preliminary report giving the possibilities to get gas or oil will be mailed promptly ABSOLUTELY FREE. Try it you will be surprised. Our motto, "NO OIL NO PAY." Address: Eurisko Prospector, 814 Insurance Exchange Bldg., Montreal, Canada.

Royalties—Production

Producing-ROYALTIES-Non-Producing
Dealers Exclusively
Schedules and Engineers reports furnished
G. D. TERRIEN
412-13 Central Bank Bldg., Tulsa, Okla.

1,500 acres Kiowa County, Okla. Test to start in two weeks on block. Will sell offset acreage $5 to $10 per acre, close in. Address Box H-341, The Oil and Gas Journal, Tulsa, Oklahoma.

CHOICE TEXAS ACREAGE — Zapata, Jim Hogg, Cameron, Caldwell, Lamar and other counties, proven or semi-proven. East Texas and other producing properties. G. W. Elliott, 430 Bedell Building. San Antonio, Texas.

Leases—Production

TALCO OIL PROPERTIES: Will buy or sell proven and semi-proven leases and royalties in Talco oil field, the hottest spot in Texas. Frank Robertson, Marvin Wells, and Frank Hill, Mt. Pleasant, Texas.

NEW MEXICO Oil and Gas Leases and Royalties. Also inquiries and listings wanted. F R. WARN, Santa Fe, New Mexico.

NUECES COUNTY, Tex. Oil and Gas Records. Daily report $5 per month. The Daily Review, Corpus Christi, Tex.

½ int. 1,000 a. oil and gas leases S.W. Ind. and first well $2,500. Perfect geol. approved loc. near prod. F. M. Pierson, Box 748, Terre Haute, Indiana.

Money Raising

WANT to borrow $60,000.00 with refinery of over $200,000.00 actual value now operating at a profit as security. Address Box H-330, The Oil and Gas Journal, Tulsa, Oklahoma.

Help Wanted

DRILLING MUD SALESMAN
WANTED FOR OIL FIELD WORK

Must be experienced in field and have own car. Salary, commission and expense allowance, depending on experience and ability. Write giving full particulars about yourself including employment history.

P. O. BOX 1183,
FORT WORTH, TEXAS.

Oil Industry Printing

OIL FIELD LEGAL BLANKS
Leases, assignments, releases, township plat books, well records, etc. Request on your letterhead gets free catalog. Olds Press, 215 East Third St., Tulsa, Okla.

Leases—Production

NEW MEXICO—My weekly scout report furnishes complete and reliable information on New Mexico developments. Send for copy. W. S. Patterson, Santa Fe, New Mexico.

SHELBY COUNTY at last has a producing well. Several tests now going down. This County has been worked out and approved by best geologists. Have 1,000 acres on structure for drilling contract. Small bonus. C. A. Parker, Box 451. Center. Texas.

DEALERS ONLY

Sell High Class Oil Leases near drilling well; no S. E. C. regulations on leases—no headaches on alowable cuts—more profits for you and your clients; we give you daily drilling reports and complete support, also take some trade when necessary. Maps are ready. Wire for them.

G. E. FISHER & CO.
518 Key Building,
Oklahoma City, Okla.

Write for oil properties, drilling blocks, leases, in new Louisiana fields. G. Lucas, 208 Milam Street, Shreveport, La.

NORTHEAST New Mexico Leases well located at bargain prices. Orbee Oil Co., 1017 Colcord Building, Oklahoma City, Oklahoma.

LANDS, Leases, Royalties, anywhere, bought, sold. Lands, $2 acre, up. Leases 25c acre, up. Advise needs. American Investment Co., Houston, Texas.

DAILY oil reports from Tillman County in the Frederick Leader; special rate 7 months $2.50. The Frederick Leader, Frederick, Oklahoma.

FOR WINN PARISH, LOUISIANA. FEE SIMPLE LANDS, LEASES, OR MINERAL RIGHTS. WRITE

BOX 945,
WINNFIELD, LOUISIANA.

FOR SALE oil and gas leases, drilling contracts and settled production in shallow territory. W. P. HARLEY. Bowling Green, Kentucky.

Incorporations

DELAWARE CHARTERS: Complete incorporating and organizing service $35. Submitted forms. Chas. G. Guyer, Inc., Wilmington. Delaware.

CHARTERS — Delaware best, quickest, cheapest, most liberal. Free forms. Colonial Charter Co., Wilmington, Del.

CLEAN UP SALE—REFINERY EQUIPMENT

Treater tanks, hot oil pumps, cracking still, tubes and headers, storage tanks, heat exchangers, electric motors and other miscellaneous refinery equipment, now on hand, to be sold at ridiculously low prices.

Wire — Phone — Write

BROWN-STRAUSS CORPORATION

Main Office—1446 Guinotte Ave., Kansas City, Mo.

Branches

Sapulpa, Okla. Arkansas City, Kans. Pyote, Texas.

18—400 and 600 amp. Hansen 1931 model welding generator units, direct connected to 6-cyl. Wisconsin gasoline engines; units skidded or on 4-steel wheeled truck; excellent condition, good as new. Price ..... $750.00 ea. Pneumatic tire truck mounted—$100.00 extra.
No control board required or furnished.

MERTES MACHINERY COMPANY
Milwaukee, Wisconsin.

GASOLINE PLANT EQUIPMENT

2—225 H. P. Miller Engines, Direct Connected Compressor, 17" x 24".

1— 50 H. P. Miller Engine.

Absorbers, Tanks, Oil Meters, All Size Fittings, Regulators, Gauges, Pumps, and Complete Equipment for 5,000,000 Cu. Ft. Capacity Absorption Plant.

Wire — Phone — Write

ROYAL OIL & GAS CORPORATION

527 McBirney Bldg., Phone 3-2909, Tulsa, Okla.

SEVERAL USED ROTARY RIGS
Spudders and Drilling Machines.
Several Steel Derricks & Rotary Equip.
J. S. Daniel, Beacon Bldg., Tulsa.

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25 K.W. and 40 K.W. Gas Engines, 220 volts, D.C. Two 100 K.W. Gas Engine-Generator Sets, 220 volts, D.C. 7x6 Ingersoll-Rand ER-1 Air Compressor, Six-inch Oster Pipe Threading Machine. Also large stock of lathes, pipe machines, milling machines, etc. Send for our list.
Terms to suit.
CINCINNATI MACHINERY & SUPPLY CO.
26 West 2nd St. Cincinnati, Ohio

125,000 feet 8"
29 lb. Standard 8 thread line pipe
A-1 Shape ready for shipment
F.O.B. Cars, Robinson, Illinois.
Inquiries Solicited.
Robinson Pipe Line Contracting Co., Inc.
Robinson, Illinois.

FOR SALE
3—80 H.P. Clark engines direct connected to 17 x 20 compressor cylinders.
1—80 H.P. Bessemer Belted engine with 56" clutch.
2—No. 25 South Western Engineering Co. gasoline distillation units.
2—50 H.P. Code boilers 125 lbs. working pressure.
PREISLER & COCHRANE
Tel. 4-5427 Philcade Bldg.
3-9501 Tulsa, Okla.

PRACTICALLY NEW

Electric rotary outfit, production and materials, for immediate sale. Call

DON MacIVOR

Bitting Bldg., Wichita, Kans.

or

BEAL

Tulsa, Tel. 4-9131.

Armstrong 50-B all-steel tractor drilling machine mounted on steel wheels; Ford AA engine, 40 ft. derrick; little used. Also guy lines, tools, pipe. May rent to responsible party. John Oswell, Aztec, San Juan County, New Mexico.

BARGAINS—Demonstrator Arc Welders. Gasoline and electric drive. 30 days' trial. Easy terms if desired. Write Ken's Exchange, Box OG-761, Troy, Ohio.

NOTICE—OIL FIELD OPERATORS
Latest thing out for drill stem test for oil and gas, fully covered and protected by patent. Tools for sale or lease. Call, write or wire E. H. Cox, Leedey, Okla.

Equipment Wanted

WANT to purchase used Tulsa Type High Pressure Absorbers and Evaporators. Wire collect—Rodessa Gasoline Co., Shreveport, Louisiana.

Patent Attorneys

REGISTERED PATENT ATTORNEYS
United States and Canada
Before disclosing your invention to anyone, send for blank form:
"Evidence of Conception."
Instructions "How to Establish Your Rights" and complete information FREE!
LANCASTER, ALLWINE & ROMMEL
418 Bowen Building,
Washington, D. C.

Steel Storage Tanks

We will erect latest type 55,000 bbl. all steel storage tanks at a great saving.

Over 500 tanks on hands from 500 bbls. to 80,000 bbls. Ready for delivery. 50—55,000 Bbl. tanks now being cut down, Haynesville, La. These tanks all built new 1924 and are extra heavy, weighing 20 tons more than standard tank.

Wire—Phone—Write—W. C. Berry

SONKEN-GALAMBA CORPORATION

64 North Second St. Kansas City, Kansas

REFINERY EQUIPMENT

2—10' x 18' x 2⅜" steel, Vogt Reaction chambers, $750 each on car, Ardmore, Okla.
Gasoline, Run Down and Pressure Tanks.
Pumps, all kinds and sizes, condenser boxes, agitators, pipe stills, everything needed for refinery requirements. Complete line of valves and fittings, Oakite treated and tested.

W. C. Berry Wire—Phone—Write H. J. Galamba

SONKEN-GALAMBA CORPORATION

64 North Second St. Kansas City, Kansas

STEEL SHEETS

⅛" to ½" thicknesses in 5' x 10' or 5' x 15' sizes, guaranteed like new, any quantity for immediate shipment, 60,000 tons on hand.

THE TANK CORPORATION

64 North Second St., Kansas City, Kan. Mayo Hotel, Room J, Tulsa, Oklahoma P. O. Box 868, Cincinnati, Ohio

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SURFACE CASING

AT GREAT SAVING

20" — 19½" — 16" — 15½" — 12½" — 12", any other sizes made to order.
Welded pipe for any purpose

SONKEN-GALAMBA CORPORATION

64 North Second St. Kansas City, Kansas

For Sale—Maps

Oilfield and County Ownership Maps. New price list on request. Send $1.00 for map of Texas and eastern New Mexico.
ZINGERY OIL MAP CO.
Fair Bldg. Fort Worth, Texas

Mailing Lists

OF ROYALTY investors by deed, guaranteed. Oil Industry Mailing List Co., Tulsa Loan Building, Tulsa, Oklahoma.

Financing

JAMES E. MILLER, 604 W. Seventh St., Tulsa, Okla., will aid in financial marketing problems. Fee basis.

PROSPECTUSES prepared and deals shaped up for registration or exemption under Federal Security Act. Fee basis. John Morris, Box 5411, Philadelphia, Pa.

Business Opportunities

GEOLOGIST desires connection on percentage basis plus expenses. Highest credentials. Address Box G-823, The Oil and Gas Journal, 415 Lexington Avenue, New York City.

Manufacturers, wholesalers or jobbers general oil country supplies wanting active representation Pacific Coast, write or wire The Refinery Supply Company of California, 5199 District Blvd., Los Angeles, California.

MAIL, OFFICE, TELEPHONE service for manufacturers to the oil industry. In business 8 years. Business Service Exchange. Tulsa Loan Building, Tulsa.

Situations Wanted

A man of experience, integrity, ability would like connection with capital to engage in oil business. Address Box H-310. The Oil and Gas Journal, Tulsa, Okla.

LUBRICATING oil engineer and salesman with demonstrated ability, 12 years' experience, wants connection with oil or supply firm, preferably in Texas territory. Excellent following. 32 years of age, married, good character and references. Address Box H-340, The Oil and Gas Journal, Tulsa, Oklahoma.

EXPERIENCED sales engineer with proven record, desires connection with company wanting representation in Mid-Continent area. Address Box H-343, The Oil and Gas Journal, Tulsa, Oklahoma.

Ranches and Farm Lands

FOR SALE
Finest 2,000 acre ranch in U. S. A. Contact owner through Box 394, Fredonia, Kansas.

CLASSIFIED DISPLAY RATES

Classified Display is set with a border and may be used in one or two column sizes.

1 Inch	*1 time*	*$5.00*
1 Inch	*13 times*	*4.50 per inch*
1 Inch	*26 times*	*4.00 per inch*
1 Inch	*52 times*	*3.50 per inch*

This space may be contracted for over a period of one year from the date of the first insertion and is PAYABLE IN ADVANCE, MONTHLY

CLASSIFIED RATES

Classified advertising rates: First insertion, 35 cents a line; each additional insertion, 25 cents a line, PAYABLE IN ADVANCE. Six words usually make a line. Count as a word each one-letter word and each group of figures. White space computed at regular line rate. Allow two extra lines for blind ads. Ads of less than three lines not accepted. No formal acknowledgment is made, and proofs cannot be shown in advance of publication.

	1 time	2 times	3 times	4 times		1 time	2 times	3 times	4 times
3 Lines	*$1.05*	*$1.80*	*$2.25*	*$3.30*	*7 Lines*	*$2.45*	*$4.20*	*$5.95*	*$7.70*
4 Lines	*1.40*	*2.40*	*3.40*	*4.40*	*8 Lines*	*2.80*	*4.80*	*6.80*	*8.80*
5 Lines	*1.75*	*3.00*	*4.25*	*5.50*	*9 Lines*	*3.15*	*5.40*	*7.65*	*9.90*
6 Lines	*2.10*	*3.60*	*5.10*	*6.60*	*10 Lines*	*3.50*	*6.00*	*8.50*	*11.00*

We reserve the right to withhold all advertising of questionable character. To avoid delay be sure to send remittance with copy. We will set your ad in the smallest amount of space possible and refund all overpayments. One-time insertions will not be run until fully paid. Forms close MONDAY NOON before each issue date.

THE OIL AND GAS JOURNAL

Tulsa, Oklahoma

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July

31—Dallas, Tex., Interstate Oil Compact Commission meeting.

September

?—Tulsa or Oklahoma City, American Petroleum Institute, Division of Production, Mid-Continent district.

9-10—Louisville, Ky., Kentucky Petroleum Marketers Assn., Brown Hotel.

7-12—Pittsburgh, Pa., American Chemical Society, semiannual meeting.

7-12—Washington, D. C., World Power (Fuel) Conference.

16-18—Atlantic City, N. J., National Petroleum Association, thirty-fourth annual meeting, Hotel Traymore.

Week of 28—Indianapolis, Ind., National Tax Conference.

October

5-9—Atlantic City, N. J., National Safety Congress.

21-22—Indianapolis, Ind., Indiana Independent Petroleum Association, fall convention, Hotel Severin.

27-29—Chicago, Ill., National Oil Marketers Assn., annual convention, Stevens Hotel.

25-30—Atlantic City, N. J., first annual convention association of Gas Appliance and Equipment Manufacturers, annual convention American Gas Association, Atlantic City Auditorium.

?—Cleveland, Ohio, American Institute of Mining and Metallurgical Engineers.

November

9-12—Chicago, American Petroleum Institute seventeenth annual meeting.